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EXPLORING THE ASSOCIATION BETWEEN HOW SOCIAL
MEDIA AFFECTS ATTITUDES TOWARD MARIJUANA LEGALIZATION

by

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B.A. May 2016, Virginia Wesleyan College

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ABSTRACT

EXPLORING THE ASSOCIATION BETWEEN HOW SOCIAL MEDIA AFFECTS ATTITUDES TOWARD MARIJUANA LEGALIZATION

Troy Adam Aubut II
Old Dominion University, 2018
Director: Dr. Scott R. Maggard

As support for marijuana legalization continues to rise, it's important to explore how the use of social media may be affecting the attitudes of Americans around this controversial topic. Social media has become a part of everyday life for most as it allows easy communication to anyone anywhere and allows the exchanging of influential ideas over a broad range of topics, especially marijuana legalization. As such, this study utilized data from the 2016 General Social Survey to examine the relationship between how the general use of social media affects attitudes toward marijuana legalization. The findings of this study suggest that social media use was associated with affecting support for marijuana legalization and that more time spent on social media was also associated with supporting marijuana legalization.

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CHAPTER 1

INTRODUCTION

Marijuana legalization is a hot topic that has seen more support today than it has in the past because of new information surrounding the drug. Nearly 64 percent of Americans support marijuana legalization compared to 34 percent back in the early 2000's or even 12 percent in 1969 (Gallup, Inc., 2017). This information has not only been spread by the news media conveying the information out to the public but has been spread through the several types of social medias platforms as well (Gorman, 2017). While many support marijuana legalization for the potential health benefit implications (41percent), there are those who support the legalization of marijuana as they see it as less harmful or not harmful at all compared to other drugs (Smith, 2015). This information about marijuana and why it should be legalized can be spread by the family and friends of those who use social media. What is perceived on social media feeds may or may not influence one's attitudes toward marijuana legalization, but this potential relationship is important to study as the world becomes more connected and begins to use social media more to shape certain attitudes. According to the National Survey of American Attitudes on Substance Abuse XVI: Teens and Parents (2017), teens who have seen images of teens passed out or using drugs on social networking sites have used alcohol (35 percent), have used marijuana (21 percent), and have friends who have used illegal drugs (38 percent); compared to the above, teens who haven't seen such images have used alcohol (12 percent), have used marijuana (5 percent), and have friends who have used illegal drugs (13 percent). Knowing this, social media may expose content that particularly normalizes or rejects marijuana, which could have an effect on attitudes toward marijuana legalization.

There is plenty of research on who and why some individuals support marijuana legalization and on who and why individuals use social media; however, there is little prior research that examines the relationship between social media use and attitudes toward drugs and drug use (Smith, 2011; CBS News, 2017). Most research particularly examined how specific drug-related content was portrayed on social media sites and how social media users perceived drug-related content. Previous studies have also tended to use one particular social media site, such as Twitter to conduct their research (Caavazos-Rehg et al., 2014; Kraus et al., 2015).

More research should explore whether or not the use of social media affects individuals' general support toward marijuana legalization. While there are known several factors that help determine why some individuals support marijuana legalization, such as their demographic characteristics or exposure to medias such as newspapers or television, social media use and exposure could potentially be another important factor to consider (Cruz et al., 2016; Stringer and Maggard, 2016). Individuals are using social media sites for more than just communicating with friends and family: they're using social media as another method to learn about the world. About 45percent of American adults use Facebook as a source of news and 26percent use multiple social media sites to obtain news (Grieco, 2017). Social media use will continue to increase as only 5percent of American adults used at least one social media platform in 2005 compared to 69percent who used one of the many types of platforms in 2016 (Pew Research Center, 2017). The extent of use of social media has also gone as far as to impact the 2016 presidential election, with current President Donald Trump using Twitter as a means of communication to politically promote himself.

Significance of Study

Social media use and marijuana legalization are relevant topics in today's ever-changing world. The use of social media among the U.S. population will continue to rise, especially as technological advances have allowed people to learn about, record and document, and communicate with others throughout the world with devices that fit in the palm of their hands (Greenwood, Perrin, and Duggan, 2016). The future of marijuana legalization will be affected by the increasing knowledge surrounding its uses, particularly its medicinal use, and by the growing support of the population who stand by their positive opinions regarding the illegal substance (Rubens, 2014). How individuals perceive marijuana legalization can be affected by various types of sources and influences, with social media being one of them (Schwadel and Ellison, 2017). As long as an individual has access to the internet, they can create as many social media profiles as they want on whatever social media platform and use those profiles to connect with others to obtain or disperse information that interests them. With this said, it is important to explore what kind of relationship that social media use and support for marijuana legalization have with each other since marijuana-related content on most social media platforms can be accessed and seen by anyone at any location. This study in particular holds significance because it can help society understand another reason for why individuals support marijuana legalization. This information can then be used to produce policies that can possibly help keep vulnerable members of the population safe from accessing marijuana-related content that can affect their attitudes on marijuana legalization and their behaviors regarding marijuana use.

Purpose of the Study

The purpose of this study is to explore the association of how social media affects an individual's attitudes toward marijuana legalization. The next chapter will begin with a discussion of Social Learning Theory, its relevance to this study, and finally a review of the previous literature surrounding the existing themes between social media and support for marijuana legalization.

CHAPTER II

LITERATURE REVIEW

This chapter discusses the prior research on social media and its influences on its users, particularly of those who support the use and legalization of marijuana. The first part of this chapter is an overview of the concepts and the applicability of Social Learning Theory to this study. Following this section, the next part will explore themes surrounding how marijuana is perceived on various social media sites, followed by how the exposure of marijuana-related content on social media sites affects its users, and finally ending on the particular demographic characteristics of supporters of the legalization of marijuana. Finally, the last part will be a critique of the literature and a review of the studies.

Theoretical Framework

The main theory that will be discussed in this section will be Ronald Akers' (1979) Social Learning Theory. This particular theory was chosen to support how criminal behavior can be learned, which may lead to imitation. Supporting marijuana legalization and using marijuana are both different actions; an individual can decide to support marijuana legalization and never once use marijuana based on personal reasons, such as for family or job safety. Supporting marijuana legalization is not illegal as compared to using or possessing marijuana, which is now legalized in over half of the United States for medical purposes (Geiger, 2018). However, social media is commonly used by many individuals to connect with family, friends, and with others who share similar interests and to learn about the world through other user's posts. Because a lot of the information on these sites are accessible to the general public around the world, it's

possible that criminal behaviors can be initiated from social media sites in today's world. For this study's case, by observing and learning about positive and supportive marijuana-related content on social media, users of the social media sites may be influenced to support marijuana legalization; some may even go as far as to imitate the behaviors of their peer's marijuana related behaviors. Those influenced by the content they see on social media may be supporting marijuana legalization or using marijuana without fully knowing all of the consequences they should know.

Akers' (1979) Social Learning Theory consists of four main concepts: differential association, definitions, differential reinforcement, and imitation. Differential Association focuses on how criminal behavior will likely occur if an individual interacts and associates with individuals in their main peer groups who are deviant or have delinquent behaviors. Another part of this concept goes into how the frequency, priority, and intensity of an individual's associations with deviant peers will also affect the likelihood of criminal behaviors. The concept Definitions refers to how an individual uses the beliefs and attitudes that they have obtained throughout their life to rationalize what behaviors they consider to be right and wrong. This concept doesn't necessarily motivate an individual to behave in a deviant manner, but allows them to understand the rewards and punishments of certain behaviors. Differential Reinforcement refers to how deviant behavior is maintained when the anticipated rewards outweigh the potential punishments. When individuals consistently receive desired rewards from deviant behavior, then they will continue committing the behavior. Finally, the concept Imitation refers to how an individual will model the behaviors of another person that they observed. The individual will observe how the behavior produced certain rewards and punishments, and they may feel encouraged to imitate the behavior accordingly if the rewards outweighed the punishments.

Akers' theory (1979) is important for understanding the research of this study because social media use can affect an individual's perspectives on marijuana legalization, not just teaching them to potentially support marijuana legalization. As more and more people begin to use social media and see marijuana-related content being posted online, their Definitions about marijuana use and legalization could be influenced by the peers who they interact with on whatever social media sites they use. Social media platforms often use a "Like Button" as way to show approval for an individual's post; when individuals have their posts "Liked" by thousands of others who follow them, then they may feel encouraged or Reinforced to keep posting similar content. Followers will see the rise of popularity for the specific Handles or Profiles posting about marijuana, and this may cause the followers to imitate them.

Previous Literature

Perceptions of marijuana on social media

Cavazos-Rehg and colleagues (2014) examined a specific Twitter handle, @stillblazingtho, for an eight month period to find out what type of content was primarily being posted as well as to gather demographic information on the followers of this pro-marijuana profile. This profile was picked for the study because it had a higher amount of followers, with almost a million followers, compared to several other profiles that only had a few hundred thousand followers. Over 2,200 tweets sent out by this profile were studied and the results showed that 82 percent (n=1,875) of those tweets were positive about marijuana compared to the 7 (.31 percent) tweets that were negative about marijuana (Cavazos-Rehg et al., 2014). The remaining 403 (17 percent) were neutral or not exclusively about marijuana at all. The study found that out of the 959,143 followers of the profile, all from around the world, 54.1 percent of

them were 17-19 years old and 93.5 percent had a personal income less than \$30,000 (Cavazos-Rehg et al., 2014). Finally, out of the 759,407 followers of the profile who live in the United States, 42.6 percent were African American and 11.9 percent were Hispanic (Cavazos-Rehg et al., 2014). With all of this said, the profile and its content appeared nearly 2.9 million times on different people's Twitter feeds (Cavazos-Rehg et al., 2014). This profile's popularity was wide reaching and shows that many young people are viewing content from this profile that is normalizing an illegal activity.

In another study, Cavazos-Rehg and colleagues (2015) collected a total of 7,653,738 tweets of influential twitter users that contained a marijuana-related keyword during a one month period in order to understand the sentiments and themes of chatter about marijuana as well as to describe the demographics of those Twitter users. They randomly selected 7,000 Tweets that belonged to Twitter users who were highly influential (in that they were interacted with by followers) and had a high amount of followers. Out of the 6,620 Tweets that were strictly about marijuana, 77 percent (5,109) Tweets were pro-marijuana compared to the 5 percent (317) Tweets that were against marijuana. The remaining 18 percent (1,194) had either a neutral or unknown sentiment towards marijuana (Cavazos-Rehg et al., 2015). A majority of the pro-marijuana Tweets came from the Twitter accounts of ordinary people/non-celebrities or from a handle named with a marijuana keyword. The next part of this study examined the demographics of the Twitter users, with 59 percent (of the 5109 Tweets) of the Tweepers being under 20 years of age and 78 percent of those Tweepers being African American. Essentially, this study found that 1 out of 2,000 Tweets were marijuana-related and were coming from influential pro-marijuana profiles who have a lot of followers, are predominantly young, and are African American (Cavazos et al., 2015). These findings are important because they showed that

marijuana-related content on Twitter is pro-marijuana and is being posted by individuals with certain demographic characteristics.

In 2016, Krauss and colleagues used Twitter to examine the sentiments and themes of Tweets that included both marijuana and alcohol over a period of one month in 2014. Over 195,200 Tweets were collected as they contained both keywords related to the two substances, and then 5,000 were randomly sampled from the collection as those Tweets had a high Klout score (measure of influence) and had a high amount of followers. The results of this study found that out of the 4,910 Tweets that were strictly about both marijuana and alcohol, 54 percent (2,648) normalized marijuana and/or alcohol, 24 percent (1,166) preferred marijuana over alcohol, 2 percent (102) preferred alcohol over marijuana, and finally 7 percent (365) discouraged the use of both substances (Krauss et al. 2016). The study also categorized the Tweets into sub themes. For the Tweets that normalized alcohol and marijuana, 17 percent of those 2,648 Tweets were describing how they were using the substances with friends and for the Tweets that preferred marijuana over alcohol, 46 percent of those 1,166 Tweets believed marijuana was safer than alcohol or believed that marijuana should be legal because alcohol is legal (Krauss et al. 2016). It is interesting to note from this study how almost a quarter of the Tweets preferred marijuana over alcohol. Most of those Tweets were about how different the effects and behaviors are for each drug, with a more positive sentiment for marijuana.

In another study by Cavazos-Rehg and colleagues (2016), the social media platform Instagram was used to explore marijuana-related posts and the demographics of those posting the images and videos. They collected just over 400,000 Instagram posts, within a 2 week time period, which contained a marijuana-related hashtag and then randomly sampled 5,000 posts from their collection. Their results showed that 43 percent (2,136) of those posts were strictly

about marijuana, with 73 percent (1,568) posts consisting of images of marijuana and marijuana paraphernalia and 27 percent (568) posts consisting of images of people using marijuana (Cavazos-Rehg et al., 2016). The results also showed that the Instagram users who posted those images were males (59 percent), single (68 percent), mainly Caucasian (48 percent) and African American (40 percent), 24 years or younger (76 percent, with 22 percent being 19 years old or younger and 54 percent 20-24 years old), and finally having more than 1,000 followers (39 percent) (Cavazos-Rehg et al., 2016). This study concluded that the marijuana-related posts normalized or promoted the use of marijuana; this can be worrisome as Instagram allows users as young as 13 years old to use the site and Instagram doesn't censor content by age throughout the site (Cavazos-Rehg et al., 2016). However, this study was limited in that Instagram did remove a lot of marijuana-related posts in 2014 because of changes to their use policy and because Instagram doesn't keep track of who or how many people are viewing the specific posts. The findings in this study showed that Instagram fostered more positive sentiment for marijuana-related content and that the demographic characteristics were also similar to the findings from prior research that used Twitter.

Thompson and colleagues (2015), gathered marijuana-related Tweets from adolescents, between the ages of 11 and 22, to understand how the content of the Tweets differed before and after two states legalized the recreational use of marijuana. They found that out of the 39,969 Tweets, Tweets that mentioned "personal use" saw a slight increase from 39.8 percent to 43 percent that were collected before (18,320) and after (18,619) the 2012 U.S. General Election (Thompson et. al., 2015). The study observed that Tweets that viewed marijuana in a positive tone saw a *small but significant* increase from before to after the General Election. Findings also showed that 66 percent of the 1,928 Tweets that were gathered from adolescent users (who

disclosed their age on their profile) had written positive views on marijuana and 43 percent also wrote about how they personally used marijuana (Thompson et Al., 2015). This study concluded with how Twitter is being used by individuals to spread mainly positive discussions about the medical and social benefits of marijuana, with little focus on the concerns and other issues of marijuana.

Morgan and colleagues (2010) used MySpace, Youtube, and Facebook to find videos and images of alcohol consumption and marijuana use behaviors to examine how frequent these depictions were posted online and to examine how participants in their study perceived the posts. The results showed that 78 percent of the participants disapproved of videos and photos of people smoking marijuana compared to the remaining 22 percent who approved of the behavior (Morgan et al., 2010). The findings showed that only 8 out of the 314 participants who were surveyed had posted photos of themselves using marijuana on MySpace or Facebook; 39 percent of the participants did have friends who posted photos of themselves using marijuana on MySpace or Facebook (Morgan et al., 2010). This study does face the limitation of only consisting of undergraduate students at a specific university, which is not fully representative of the population. Ultimately, the findings from this study showed that participants were observing their peers using marijuana on their social media sites such as Facebook or MySpace, and most of them disapproved of such behaviors because of the illegality of marijuana use and because of the risk of family members or employers seeing the content (Morgan et al., 2010).

In a study by Dai and Hao (2017), Twitter was used to examine public attitudes on marijuana use for individuals suffering from PTSD. They collected and analyzed over 1.2 million Tweets between August 2015 to April 2016 that were related to PTSD and found that 5.3 percent (66,517) of those Tweets were about PTSD and using marijuana for treatment (Dai and

Hao, 2017). Even though a small percentage of these Tweets were about PTSD and using marijuana for treatment, the study estimates that these Tweets were potentially observed by over 489 million Twitter users (Dai and Hao, 2017). Their research found that 89.6 percent of PTSD and marijuana-related Tweets contained predominantly supportive and positive opinions compared to the remaining Tweets that were neutral or against marijuana use (Dai and Hao, 2017). By performing univariate analysis to examine how socioeconomic factors affect opinions, they found that states with fewer persons under 18 years old, with higher education rates, and lower per capita income were associated with higher support rates for using marijuana for PTSD treatment (Dai and Hao, 2017). The content that was studied showed that there was positive support for marijuana use for PTSD treatment and there was little content that discouraged the use of marijuana for PTSD treatment.

The amount of marijuana related advertisements shown differs depending on the social media platform. In another study, Cavazos-Rehg and colleagues (2016) collected Instagram posts and found that out of the 2136 marijuana-related posts, only 9 percent (187) posts were advertisements that were specifically marketing marijuana. Most of the advertising consisted of shops or dispensaries self-promoting themselves, advertisements for paraphernalia used to ingest marijuana, and finally advertisements of accessories, like clothes or jewelry, with marijuana-related images or words (Cavazos-Rehg et al., 2016). Even though a small portion of the posts were advertisements, they were still being seen by thousands of Instagram users.

Krauss and colleagues (2017) used surveys to explore how marijuana users were being exposed to marijuana advertisements and to determine what the main sources of these advertisements. The results showed that 67 percent of the participants were exposed to marijuana advertisements on social media sites, such as Facebook (47 percent) and Instagram (27 percent)

(Krauss et al., 2017). Additionally, participants who were seeking advertisements did so mainly for medical reasons (41 percent) as compared to recreational reasons (18 percent). The demographic characteristics showed that most of the participants were male (62 percent), white (63 percent), had at least some college education (75 percent), were employed (73 percent), and lived in a state where it was legal to use marijuana medically or recreationally (61 percent) (Krauss et al., 2017). The findings in this study showed that social media is a growing source for marijuana-related advertisements as compared to traditional forms of media like TV or radio.

The effects of exposing marijuana on social media

In order to understand why showing marijuana on social media has certain effects on users, it's important to examine how social media affects users in general. There are a variety of ways social media affects users because of how it's nearly universal, takes up a varying amount of time in an individual's life, and how it influences online and offline behaviors and attitudes. Grace and colleagues (2014) surveyed 1,563 sophomore students from five high schools in Southern California to explore what effects online activity on Facebook and MySpace have on the health behaviors of the students. The study had two important findings: the first finding was a significant relationship showing that users who saw pictures of their friends partying or drinking admitted to smoking cigarettes and drinking alcohol themselves (Grace et al, 2014). The second finding was a significant relationship showing that adolescents who didn't have friends who drink alcohol but were exposed to alcohol related-content on social media were at a higher risk of drinking alcohol (Grace et al., 2014). Since the respondents were underage, they were viewing content on Facebook and MySpace of their peers committing risky behaviors; because of this, they were seeing content that was being normalized by their peers.

Zuniga and colleagues (2012) surveyed 475 individuals to find how social media sites can promote acceptable behaviors and attitudes when those individuals use social media as a news source for public affairs or community relations. The study found a significant relationship showing that those who used social media as a news source were more likely to engage in civic activities (Zuniga et al. 2012). Using social media as a news source was also significant with both online and offline political participation (Zuniga et al. 2012). They also found a significant relationship showing that young people, minorities, people with lower income, and lower levels of education, respectively, were more likely to use social media as a source of news (Zuniga et al. 2012). The findings of this study show that particular groups of individuals' beliefs and attitudes regarding politics and civic activities are being influenced by social media. Because social media encourages communication and connection, individuals are not only seeking out specific news sources but are also being exposed to their friends' and family' desired news sources.

Gutierrez and Cooper (2016) conducted an online study using 699 undergraduate students from a university to examine how the participants used social media sites to investigate associations between social media use and drug use. Findings showed that the average participant was spending 46 hours per month using social media sites and that 71 percent used alcohol, 14 percent used marijuana, and 3 percent used synthetic marijuana in the past month (Gutierrez and Cooper, 2016). The findings showed that hours spent on social media sites was significantly associated with alcohol use and synthetic marijuana use; there was no significant association between hours spent on social media sites and marijuana use. However, Gutierrez and Cooper mention that these associations could be affected by third variables, like boredom

and impulsivity, causing the participants to spend more time on social media sites and to use alcohol and synthetic marijuana.

Cabrera-Nguyen and colleagues (2016) surveyed 587 participants who were between the ages of 18 to 25 and were Twitter users to explore the association between Twitter exposure and alcohol and marijuana related behaviors. They used two multivariate logistic regression models to find the association between exposure levels of pro-alcohol and pro-marijuana content on Twitter and how the participants used each substance. Their results showed that 42 percent reported current heavy alcohol use and 16 percent reported current marijuana use (Cabrera-Nguyen et al., 2016). From their sample, they found that 38 percent were actively exposed, 34 percent were passively exposed, and 28 percent weren't exposed to pro-alcohol content on Twitter; 19 percent were actively exposed, 28 percent were passively exposed, and 54 percent weren't exposed to pro-marijuana content on Twitter (Cabrera-Nguyen et al., 2016). Ultimately, they found that exposure to content on Twitter that was pro-alcohol and pro-marijuana use was significantly associated with participants using those substances.

However, in a separate study by Stoddard and colleagues (2012), they also wanted to examine the association between alcohol and other drug use content being shown on social media sites and the participants' use of alcohol and other drugs. They used multivariate regression that showed that the participants' peers who used alcohol and other drugs was positively associated with marijuana use among the participants. However, the study also found that alcohol-related content posted on social media sites and the peers of the participants who used alcohol and other drugs was associated with higher levels of alcohol use among the participants (Stoddard et al., 2012). This study didn't find a relationship of promotive norms of alcohol and other drug-related content on social media sites affecting the participants' use of

marijuana. The study concluded with how their marijuana-related findings could be affected by various factors, such as how there is a stigma for marijuana use since it is still considered illegal by the Federal Government and how individuals are aware that potential employers may be checking their profiles on whatever social media sites they use (Stoddard et al., 2012).

Krauss and colleagues (2016) used Youtube to explore videos of dabbing-related content, another more potent method of using marijuana, to understand the characteristics of the people dabbing and the messages of each video. The results showed that out of the 116 videos that were collected, 42 percent (43) of the videos showed dabbers over the age of 25 and 19 percent (20) of the videos showed people under the age of 25. They found that 67 percent of the videos showed male dabbers compared to female dabbers (14 percent). The results also showed that 34 percent of the videos were product reviews or promotions, 28 percent were educational videos about dabbing, 21 percent were warnings about dabbing, and 54 percent were considered to be related to medical marijuana. In conclusion, this study found how most of the videos about dabbing were easily accessible and contained various kinds of information about dabbing, with little focus on the warnings of dabbing. Youtube is also a very popular media platform that anyone can use to find whatever videos they are interested in. Knowing this, individuals have the ability to learn different techniques of using marijuana from Youtube whenever they want and wherever they are.

Social media has been used as a means of spreading awareness and pushing for change on various issues that affect groups of individuals both inside and outside of the United States. Some movements that have been influenced by social media include the Arab Spring, Black lives Matter (BLM) and the Occupy Wall Street Movement. As people use social media to connect with and follow celebrities or other famous and popular individuals with similar interests, they

may be more likely to participate in movements or protests. When people participate in such events, they may garner even more support from others in order to bring change to an issue.

In a study by Click, Lee, and Holladay (2015), the researchers interviewed 45 participants who were fans of a particular celebrity in order to explore and understand how the celebrity's and the fans' relationships are deepened through social media. The celebrity, Lady Gaga (singer and actress) encourages her followers to both stand up against bullying and to stand up for an individual's sexual identity and uses Twitter to as a means of communication. Most of the results from the study consist of the interview responses from the participants, which were positive and supportive of Lady Gaga's messages on social media (Click et al., 2015). The study found three main themes from the participants: 1) there is identification with Lady Gaga through social media, 2) Lady Gaga serves as a great political role model, and 3) Lady Gaga has strengthened the political positions of the respondents (Click et al., 2015). Because the respondents were following Lady Gaga on social media, they have been able become a part of online communities that share similar interests (Click et al., 2015). By doing so, these individuals are able to find support from the online communities and are able to relate with others within the communities (Click et al., 2015). However, the study is concerned that the respondents may only be participating in movements because of the celebrity involvement, and this may cause the respondents to not fully delve into the issue at hand (Click et al., 2015). While the study was small and limited, it gives an idea of how relevant social media is nowadays for many individuals, especially when it comes to political issues. While it can be argued that it's the celebrity mainly causing the respondents to participate in movements, social media serves as a strong communication link that makes the messages more personal between the given parties.

Plus, social media allows individuals to follow behind many other famous and popular people who are involved in similar or completely different issues.

According to a study by Nikita Carney (2016), following the murders of Michael Brown and Eric Garner, two young black males, the Black Lives Matter movement was reignited, leading to powerful discourses on social media, particularly that of Twitter. Carney read through 500 Tweets with hashtags such as “#BlackLivesMatter” and “#AllLivesMatter,” and then focused on 100 from the given sample. The Tweets were analyzed and then coded into three main themes surrounding the movement: A call to Action, Struggles over Signs (Black Lives Matter versus All Lives Matter), and Shifting Signs and Discourse (Carney, 2016). The study also obtained demographic information from each Tweet if it was visible, finding that 31 percent were black, 27 percent were white and 23 percent were of a diverse age and race, with the remaining 19 percent having unknown identities (Carney, 2016). The first theme focused on how “#BlackLivesMatter” was used as means of gaining attention for the murders of the two black youth and the racial issues that black people experience in the U.S., particularly that of police violence. The next theme focused on how “#AllLivesMatter” was being used by some individuals to discourse or undermine the message of those using “#BlackLivesMatter.” There were arguments over the use of the hashtags from both sides, each providing justification for why they used the hashtags. Finally, the last theme focused on how both hashtags were used by activists to organize events and mobilize protests. By this point, the arguments over the semantics of each hashtag was overlooked in order to lead people past dialogue and into action (Carney, 2016). The study shows the prevalence of using small phrases on social media to build solidarity and to allow individuals to relate and support each other in regards to an issue that currently affects them or potentially could affect them. The use of Twitter allowed individuals

both for and against the Black Lives Matter movement to communicate their opinions and concerns to the public that many others would be reading. Unfortunately, the extent of each Tweeter's support was not measured and it is difficult if not impossible to determine if those who supported the Black Lives Matter movement might have been involved in the related events and protests or not.

Demographic characteristics and factors of supporters of marijuana legalization

Stringer and Maggard (2016) used the General Social Survey (GSS) as a secondary data source to examine how media exposure affects American's attitudes about the legalization of marijuana. Their study demonstrated that as time passed in the United States, there has been increasing favor for the legalization of marijuana and that media exposure does affect the attitudes of marijuana legalization. As the media began to give positive coverage on marijuana, the support for marijuana legalization also began to rise. The findings suggested that as the hours of TV a person watched per day increased and as the frequency a person read newspapers increased, the odds of favoring the legalization of marijuana increased 6 percent and 10 percent, respectively (Stringer and Maggard, 2016). They also found that the respondents who were White, had kids, and were not married had an increased odds of favoring the legalization of marijuana; year of birth was positively associated with favoring legalization of marijuana with an increase of 2 percent as birth year increased; and those who weren't affiliated with any religions were more likely to support marijuana legalization compared to those affiliated with a religion. Essentially, in the 1990's, media coverage began to portray marijuana in a positive light, as states decriminalized or legalized marijuana and especially as marijuana was being used medicinally.

Cruz, Queirolo, and Boidi (2016) conducted a survey to explore and understand what factors may be associated with public support for the legalization of marijuana in the U.S,

Uruguay, and El Salvador. They found that individuals who used marijuana were more likely to support the legalization of marijuana with the t-statistics being 6.75, 5.97, and 5.52 for the U.S., El Salvador, and Uruguay, respectively (Cruz et al., 2016). They also found that support for marijuana legalization in the U.S, Uruguay, and El Salvador was affected by political factors, such as approval of the president and political tolerance, instead of demographic factors (Cruz et al., 2016).

Research Questions

While most of these studies found interesting and revealing information about the opinions, beliefs, and effects of marijuana and social media, they aren't without limitations. First, six of the studies were only based on Twitter and can't be generalized to the various other forms of social media that people use. Because social media use and marijuana legalization are both recent topics of interest, there is little research explaining how both are associated with each other, especially since the many social media sites differ from one another. Second, most of the studies had no way of finding out if the social media users and their followers were using marijuana themselves unless they states so. Users and nonusers of marijuana alike may be following these influential social media users but for different reasons. Third, the keywords that the researchers collected for marijuana were not terribly comprehensive and didn't encompass all the terms that may be associated with supporting the legalization of marijuana.

Despite these limitations, all studies revealed that there was a relationship between social media use and attitudes toward marijuana use and legalization. The social media sites that were studied showed that there was mainly positive support for marijuana-related content being posted. Most of the content presented on social media was normalized or even promoted marijuana legalization, and very little content was posted about the negative consequences of

marijuana use or its legalization. Next, some of the studies had mixed results about how the use of social media affected its' users behaviors when it came to marijuana use. Two of the studies found that using social media and viewing marijuana-related content on Twitter affected the participants' marijuana use while another study found that there was no relationship between viewing marijuana-related content on social media and the participants' behavior of marijuana use. However, most of the marijuana-related content being posted on the social media sites can be easily accessed and most of them weren't censored by age. Finally, the demographic characteristics showed important findings about individuals who support the legalization of marijuana. Whereas one study found that participants with certain demographic characteristics were more likely to favor the legalization of marijuana, the other found that participants who actually used marijuana were more likely to support the legalization of marijuana.

Based on the literature reviewed above, the following hypotheses have been developed:

H1. Those who used social media will more likely support marijuana legalization than those who didn't use social media.

H2. Out of several particular types of social media platforms including Facebook, Instagram, and Snapchat, the use of Twitter will be most associated with attitudes supporting marijuana legalization.

H3. Individuals who spend more than 1 hour a week on social media will be more likely to support marijuana legalization.

The purpose of this chapter was to review the prior research literature conducted on how social media can be associated with the support of marijuana legalization as well as to provide an overview of the theoretical framework relevant to this study. The next chapter will be about the research Methodology that will be used for this study.

CHAPTER III

METHODOLOGY

This chapter provides an overview of the research methodology that will explore the association of how social media affects attitudes toward marijuana legalization. The chapter will begin with a discussion of the research design. Next, a discussion of the variables used in the study followed by a discussion of the techniques of statistical analyses being utilized.

Research Design

This study is a quantitative, cross-sectional design aimed at how individuals' social media behaviors affect their attitudes toward marijuana legalization. The sample came from the 2016 General Social Survey. The sample consisted of 2,867 participants who were 18 years old or older, spoke English or Spanish, and lived in households in the United States. The majority of the interviews were conducted face-to-face, with some interviews being conducted by computer-assisted personal interviewing and others being conducted by using telephones.

Variables of the Study

Table 1 shows how the dependent, independent, and control variables are recoded for this study.

Dependent variable

The dependent variable for this study is the respondents' attitude toward marijuana legalization and whether or not it should be legal or not legal. As a dichotomous level of measurement, the dependent variable is coded into two responses: "legal" (1) and "not legal" (0).

Independent variables

There are several independent variables used in this study that measure behaviors related to social media. The GSS contained 12 types of Platforms that might be used by respondents: Classmates, Facebook, Flickr, Google+, Instagram, LinkedIn, Pinterest, Snapchat, Twitter, Tumblr, Vine, and Whatsapp. Each variable was measured dichotomously where “yes” was coded as 1 and “no” coded 0.

The last set of variables measured the frequency of the respondent’s use of the Internet or web-enabled applications/Apps. The variables measured how many hours the respondents used the internet or web-enabled applications/Apps on a weekdays and weekends. Unfortunately, this variable didn’t measure any particular type of app and was asking for the respondents’ general use in hours.

Control variables

Political Party Affiliation measured the respondent’s political affiliation. The responses from the survey consisted of 7 responses (STRONG DEMOCRAT; NOT STR DEMOCRAT; IND, NEAR DEM; INDEPENDENT; IND, NEAR REP; NOT STR REPUBLICAN; and STRONG REPUBLICAN), but the variable is recoded into a dummy variable. Democrat is coded into Yes (1) with the other variables being coded into No (0). Strength of Religious Affiliation measured the strength of the respondents’ religious affiliation using 4 responses (STRONG; NOT VERY STRONG; SOMEWHAT STRONG, NO RELIGION). This variable became a dummy variable with Strong or Stronger being coded into (1) and the other responses recoded to make Not Strong (0). Age was a scale level of measurement in the survey that measured the respondent’s age and the responses started at 18 and went up to 89 or older. Race was a categorical variable with three responses (WHITE; BLACK; OTHER) and is recoded into

a dummy variable with White being (1) and the other races being (0). Sex was a categorical level of measurement that recorded the Respondent's sex and is recoded into male being (1) and female being (0). Degree is also a categorical level of measurement that measured the respondent's highest degree obtained. This variable consists of 5 responses (LT HIGH SCHOOL; HIGH SCHOOL; JUNIOR COLLEGE; BACHELOR; GRADUATE) is recoded as a dummy variable with Bachelor's degree or higher as (1) while the other responses are recoded as lower levels of education as (0).

Statistical Analyses

Descriptive statistics

For the measures of central tendency and dispersion, the mean and standard deviation are appropriate statistics to use for this study as some of the variables are nominal. However, it would also be appropriate to use mean, standard deviation, and range for the control variables that are ordinal.

Bivariate analysis

For the bivariate analysis, Cross Tabulations are used for the Pearson Chi-Square and Cramer's V. This technique is appropriate as Cross Tabulations will help to find the significance of the relationship as well as the direction and strength of the relationship. Linear Regressions are also used to find multi-collinearity and the variance inflation factor, which will help to find out if certain social media sites are affecting the data. T-tests are used on the continuous variables for Age and number of hours spent on the internet/apps during the weekdays and weekend.

Multi-variate analyses

Binary logistic regression is used to explore the relationship between the dependent, independent, and control variables. Because the dependent variable is binary, this technique is useful for predicting the likelihood of the respondent's support for marijuana legalization. As in the bivariate analysis, the significance level and the logistic regression coefficients will help explain any relationships through odds ratios.

CHAPTER IV

RESULTS

Table 2 shows the descriptive statistics for all of the variables in this study. A majority of U.S. residents (66 percent) believe that marijuana should be legal. The sample spent an average of 3.04 and 2.87 hours on the internet on the weekdays and weekends. A third of the sample (34 percent) were Democrat and only 33 percent have a strong affiliation with their religion. The age range for the sample was 18-89, with the median being 43, and 76 percent of the sample were white. Just 36 percent of the sample possessed a bachelor's degree or higher while the rest did not. Finally, under half of the sample was male (42 percent) with the rest being female. The respondent's social media use consisted of 6 percent using Classmates, 84 percent using Facebook, 3 percent using Flickr, 39 percent using Googles+, 35 percent using Instagram, 32 percent using LinkedIn, 40 percent using Pinterest, 26 percent using Snapchat, 6 percent using Tumblr, 21 percent using Twitter, 5 percent using Vine, and 14 percent using WhatsApp.

Table 3 displays the results of the cross tabulations for the dependent variable with the independent variables and control variables. For the control variables, the variables that were significant were the Political Affiliation, Strength of Religious Affiliation, and Sex. For those who were Democrat, 66 percent support marijuana legalization compared to the 57 percent who were not Democrat. For those who had a Strong Religious Affiliation, only 45 percent support marijuana legalization compared to the 70 percent who don't have a Strong Religious Affiliation. At 65 percent, males were likely to support marijuana legalization compared to 57 percent of females who support marijuana legalization. Since 5 of the social media sites had means below 20 percent, they were taken out of the cross tabulations. In the set of independent variables that consist of social media apps, only 2 out of the 7 social media apps were significant: Facebook

and Snapchat. Those who used Facebook support marijuana legalization at 67 percent compared to those who didn't use Facebook at 61 percent. Finally, 67 percent of those who use Snapchat support marijuana legalization compared to 64 percent who don't use Snapchat.

Table 4 displays the results for the T-tests for the continuous, independent variables and the one control variable. For the independent variables, Hours of Internet use during the weekdays and Hours of Internet use during the weekends were significantly associated with support for marijuana legalization. The respondents who supported marijuana legalization were spending 3 hours on the internet/web-enabled apps on both the weekends and weekdays compared to those who didn't support marijuana legalization and only spent 2 hours on the internet/web-enabled apps. For both variables, those who spent more hours on the internet support marijuana legalization compared to those who didn't support marijuana legalization. Age, however, wasn't significantly associated with support for marijuana legalization in the T-tests.

The Cramer's V statistics showed that most of the variables had weak to very weak levels of association. All of the social media apps used in this study had very weak levels of association with attitudes of marijuana legalization. Strength of Religious Affiliation was the only variable that had the highest level of association at .24; however, this relationship was still low.

The Results of the Multivariate Logistic Regressions predicting support for marijuana legalization are displayed in Table 5. Three models were run: Model A presents the results of the logistic regression for the dependent variable with the control variables, Model B presents the results of the logistic regression for the dependent variable with the independent variables, and Model C presents the results of the logistic regression for the dependent variable with all of the variables.

The results in Model A show the logistic regression for the dependent variable with the control variables and almost all of them were significant. Those who identify as Democrats had a 72 percent higher odds of supporting marijuana legalization when compared to those who aren't Democrats. Compared to females, males had a 41 percent higher odds of supporting marijuana legalization. However, those who did have a strong religious affiliation had a 60 percent lower odds of supporting marijuana legalization compared to those who don't have a strong religious affiliation. Age had a 3 percent lower odds of supporting marijuana legalization with each increase in age years. White respondents also had a 27 percent decrease in odds of supporting marijuana legalization compared to nonwhites. The only variable that didn't have significance was the Highest Degree obtained.

The results in Model B show the logistic regression for the dependent variable and the independent variables. However, none of the variables had any significant effect.

Lastly, when it comes to Model C the logistic regression for the dependent variable and all of the variables of the study only showed a few significant results. When compared to Model A, most of the variables saw a slight decrease in the odds ratio. The variables that were significant were Democrat, Religious Strength, Sex, and Facebook. Those who were Democrats had a 69 percent increase in odds of supporting marijuana legalization compared to non-democrats. Those who had a strong religious affiliation had a 67 percent decrease in odds of supporting marijuana legalization compared to those who didn't have a strong religious affiliation. Males had a 37 percent increase in odds of supporting marijuana legalization compared to females. Finally, those who used Facebook had a 55 percent increase in odds of supporting marijuana legalization compared to those who didn't use Facebook.

H1. For those who used social media, there were significant findings to support that they will be more likely to support marijuana legalization than those who didn't use social media.

H2. Out of the several types of social media platforms, Twitter was not more associated with marijuana legalization.

H3. There were significant findings that support if an individual spent more time on social media, they'd be more likely to support marijuana legalization.

CHAPTER V

CONCLUSION

Results of this study show that there may be a relationship between social media use and toward attitudes of marijuana legalization. This study found that the 66 percent of the sample support marijuana legalization, which is only 2 percent more than what the Gallup Inc. (2017) had gathered at 64 percent. The previous literature showed that marijuana was being portrayed and perceived in a positive manner on multiple social media sites such as Twitter, Facebook, and Instagram (Cavazos-Rehg et al., 2014; Krauss et al., 2015; Cavazos-Rehg et al., 2016;). Because of this, it is possible that one may be exposed to pro-marijuana legalization and pro-marijuana use content when they use any of the studied social media apps. The first research question of this study wanted to explore how individuals who used social media may be more likely to support marijuana legalization. The results from the chi square show that there were significant relationships between the dependent variable and the first set of independent variables that measured hours spent on the internet. However, when it came to which social media app had any kind of relationship with marijuana legalization, only two social media apps had significance: Facebook and Snapchat. Facebook is significant in almost of the statistical analyses within this study, which is surprising since only a few studies used Facebook and none of the studies even mentioned Snapchat (Morgan et al., 2010; Krauss et al., 2017; Grace et al., 2014).

Facebook was used in some of the studies to explore the relationship between social media use and support for marijuana legalization. According to Morgan and colleagues (2014), users would disapprove of marijuana-related behaviors since it's illegal but over a third of the respondents had peers posting images of themselves using marijuana. Grace and colleagues

(2014) found that respondents who observed their peers or even strangers committing risky behaviors, such as smoking or drinking, were either committing the behaviors as well or had a higher risk of committing the behaviors. Facebook also was a site where marijuana was advertised in a positive manner, especially with users seeking ads for medicinal reasons (Krauss et al., 2017). While only two social media sites had an association with support for marijuana legalization, this does reinforce the research question and the study of there being a relationship between social media and support for marijuana legalization. From the study's sample population, this shows that only a portion of individuals who use social media support marijuana legalization, while the majority of those who don't use social media still do support marijuana legalization. This can be seen as most of the sample's population didn't use a lot of the social media apps, but still supported marijuana legalization more than those who didn't support marijuana legalization.

For the second research question, Twitter was hypothesized to be more associated with marijuana legalization. Twitter was not significantly associated with marijuana legalization in the bivariate analyses. Twitter was chosen on the basis that previous studies used the app for their research as there were several features present in the app that allowed the researchers to measure an individual's *limited* extent of support for marijuana-use and marijuana legalization (Cavazos-Rehg et al., 2014; Cavazos-Rehg et al., 2015; Krauss et al., 2016; Cavzos-Rehg et al. 2016; Thompson et al., 2015). One reason as to why Twitter might not have been significantly associated with marijuana legalization in this study may be due to its low sample size of 21 percent compared to Facebook's larger sample size of 84 percent. However, this study did find that Facebook was significant in both of the statistical analyses, which is surprising. While both Twitter and Facebook are popular social media platforms, they differ in the user base and in how

things are posted. Twitter posts tend to consist of messages, images, or videos that can be liked and shared freely by followers. Further, Cavazos-Rehg and colleagues (2015) found that Twitter was a social media platform that “facilitates chatter” about marijuana, with most of the content being pro-legalization and even pro-use. Facebook is practically the same as Twitter but more in depth and more personal, especially since most users tend to use their full names for their accounts. With that being said, Facebook wouldn’t be an ideal place to post some opinions, especially on marijuana legalization, as family members, friends, and even employers can view those posts. Individuals who use Twitter can make up usernames that can allow them to maintain a sense of anonymity, which further allows them to post and follow content freely (Cavazos-Rehg, 2014). With that being said, Facebook wouldn’t be an ideal place to post some opinions, especially on marijuana legalization, as family members, friends, and even employers can view those posts (Grace et al., 2014).

Finally, the last research question had to do with time spent more than one hour on social media apps, then they will be more likely to support marijuana legalization. The chi-square results from the T-tests showed that hours spent using the internet on the weekdays and hours spent using the internet on the weekends were significant. However, the variables had no significant relationship in the logistic regression. This question was chosen in relation to previous studies that measured how many hours the respondents were spending on social media. Similar to one of previous studies, they found that there was no significant relationship between hours spent on social media and marijuana use which could be explained by other variables such as boredom (Gutierrez and Cooper, 2016). The reasoning behind this question was that if an individual spent more time on social media, then they might have a higher chance of being exposed to marijuana related content, especially if they have friends on the social media apps

that share that kind of content (Grace et al., 2014; Zuniga et al., 2012; Cabrera-Nguyen et al., 2016; Stoddard et al., 2012). The sample in this study did spend 3 hours on the weekdays and 2 hours on the weekends using the internet's web-enabled apps, while also supporting marijuana legalization. It is nearly impossible to determine the extent of their support for marijuana in any way without asking the social media users directly.

The study found that specific demographics support marijuana legalization, such as Democrats and those with little to no Religious Affiliation having an increased odds of favoring marijuana legalization, which is what previous studies found (Cavazos et al., 2014; Cavazos et al., 2015; Cavazos et al., 2016; Thompson et al., 2015; Krauss et al., 2016; Krauss et al., 2017; Stinger and Maggard, 2016). Males were also more likely to support marijuana legalization, the results of the binary logistic regression showed that Age and Whites significant when only the control variables were tested. There was a 3 percent decrease in supporting marijuana legalization with each increase in age years, showing that those who are younger than 43 may be more likely to support marijuana legalization than those who are older and that white had a 27 percent decrease in odds of supporting marijuana legalization. However, when all of the variables were tested in the final model, Age and Race were no longer significantly associated with supporting marijuana legalization. The influence of Age and Race on the attitudes toward marijuana legalization could be mediated by social media; this relationship should be further explored by future studies. In this study, a majority of the social media apps had less responses compared to other popular social media apps like Facebook and Instagram. Some of them made sense, such as Flickr, Vine, and WhatsApp, where these platforms were a means of communicating particular ideas and reviews about specific topics instead of encouraging discussion. By using the General Social Survey, this study was able to obtain a general view of

what social media apps may potentially have an influence on marijuana legalization attitudes, and points to a new social media app that may be worth exploring, such as Snapchat, which had significant findings in the bivariate analyses.

Ultimately, based on this study it would appear that the relationship between social media use on attitudes toward marijuana legalization is limited. However, there are some important limitations to consider. A limitation to this study is the difficulty in determining the respondent's extent of support for marijuana legalization. The dependent variable was dichotomous, and the survey doesn't go into whether or not the respondents' support the legalization of recreational use, medicinal use, or both types of use of marijuana. Therefore even if the respondents in the survey did support marijuana legalization, there was no way to tell if they supported full legalization or one of the types of legalization. Another limitation to this study was that it was unable to measure the extent of what specific social media site was used more by the sample. More so, the data provided for this study did not explore if the individuals followed marijuana related content on any of the social media platforms and only asked if they generally used social media sites. Even if the respondents did use a social media app and also favored marijuana legalization, this study was unable to measure the extent of what content on any of the social media sites influenced their attitudes on marijuana legalization or if their attitudes on marijuana legalization influenced what content social media they followed.

Unlike the previous studies mentioned, this study tried to exclusively find a relationship between the popular types of social media's influence on attitudes toward marijuana legalization. The previous studies mainly explored how marijuana-related content was positively perceived on social media sites and how social media was affecting the users (Cavazos-Rehg et al., 2014). Grace and colleagues (2014) found that social media users who were observing images of people

using alcohol were at a higher risk of using alcohol themselves. By observing such behaviors, it is possible for one to imitate those behaviors whether they are imitating friends or people they don't personally know. Thereby, if a social media user is observing their peers posting content on marijuana legalization, then they may feel the need to support it as well, especially if their peers are receiving positive responses for doing so. With this in mind, this study tried to build off of previous study's findings in that if an individual is interacting with marijuana related posts and usernames on social media that are positively perceived, then they might originally support marijuana legalization *or* they originally learned to support marijuana legalization because of its positive perception and the time they spent on social media. Whatever the case may be, policies should be developed in order to make sure that the correct information is being presented to social media users regarding marijuana legalization.

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APPENDIX

TABLE 1. Variables in the Study

VARIABLES	CODING
DEPENDENT VARIABLE	
<i>Attitude on marijuana legalization</i>	0=Not Legal; 1=Legal
INDEPENDENT VARIABLES	
<i>Type of social media used (12 types)</i>	0= No; 1=Yes
<i>Frequency of social media use</i>	Scale; 1-24 hours
CONTROL VARIABLES	
<i>Political Party</i>	0=Not Democrat; 1= Democrat
<i>Strength of Religious Affiliation</i>	0=Not Strong; 1= Strong
<i>Age</i>	Scale; 18-89, 89 or older
<i>Race</i>	0= Non-White; 1= White
<i>Education</i>	0= Less than a Bachelor's Degree; 1= Bachelor's degree or higher
<i>Sex</i>	0= Female; 1= Male

Table 2. Descriptive Characteristics (N=1101)

Variable	Mean	SD	Range
Marijuana should be made legal	.66	.47	
Internet use on Weekday- Hours	3.05	3.4	0-24
Internet use on Weekends- Hours	2.87	3.48	0-24
Democrat = 1	.34	.48	
Strong Religious Affiliation = 1	.33	.47	
Age (Continuous)	43	15.9	18-89
White = 1	.76	.43	
Bachelor's or higher = 1	.36	.48	
Male = 1	.42	.49	
Use Classmates	.06	.24	
Use Facebook	.84	.37	
Use Flickr	.03	.19	
Use Googles+	.39	.49	
Use Instagram	.35	.48	
Use LinkedIn	.32	.47	
Use Pinterest	.4	.49	
Use Snapchat	.26	.44	
Use Tumblr	.06	.23	
Use Twitter	.21	.41	
Use Vine	.05	.21	
Use Whatsapp	.14	.34	

Note. *p < .05. **p < .01. ***p < .001.

Table 3. Crosstabulation for Dependent Variables with Control and Independent Variables

Variable	Marijuana Legalization				Chi-Square	Cramer's V
	Yes		No			
	N	%	N	%		
Democrat					15.2 ***	.09
Yes	413	66.8	205	33.2		
No	663	57.4	493	42.6		
Has Strong Religious Affiliation					108.9***	.24
Yes	303	45.4	365	54.6		
No	811	70.1	346	29.9		
White					1.07	.02
Yes	839	61.8	518	38.2		
No	288	59.1	199	40.9		
Has Bachelor's or Higher					.491	.02
Yes	339	62.3	205	37.7		
No	785	60.6	511	39.4		
Male					14.5***	.09
Yes	548	65.9	284	34.1		
No	578	57.2	433	42.8		
Use Facebook					4.9*	.06
Yes	657	67.8	312	32.2		
No	203	61.1	129	38.9		
Use Google+					.003	.002
Yes	299	66.2	153	33.8		
No	561	66	289	34		

Note. *p < .05. **p < .01. ***p < .001

Table 3 (Cont'd). Crosstabulation for Dependent Variables with Independent and Control Variables

Variable	Marijuana Legalization				Chi-Square	Cramer's V
	Yes		No			
	N	%	N	%		
Use Instagram					3.4	.05
Yes	285	69.7	124	30.3		
No	575	64.5	317	35.5		
Use LinkedIn					.93	.03
Yes	256	68.1	120	31.9		
No	604	65.3	321	34.7		
Use Pinterest					.623	.02
Yes	295	64.7	161	35.3		
No	565	66.9	280	33.1		
Use Snapchat					6.05*	.07
Yes	216	72	84	28		
No	644	64.3	357	35.7		
Use Twitter					3.43	.05
Yes	175	71.1	71	28.9		
No	685	64.9	370	35.1		

Note. *p < .05. **p < .01. ***p < .001.

Table 4. T-tests for Independent and Control variables with support for marijuana legalization (N=1147)

Variable	Mean	SD	t	df	Sig.
Internet use on Weekday- Hours (Continuous)			-3.6	1145	.003
Yes	3.4	3.7			
No	2.6	3.2			
Internet use on Weekends- Hours (Continuous)			-3.9	1145	.001
Yes	3.2	3.7			
No	2.3	2.9			
Age (Continuous)			3.9	1145	.194
Yes	41	15.4			
No	45	16.4			

Note. *p < .05. **p < .01. ***p < .001.

Table 5. Binary Logistic Regression results for predicting Support for Marijuana (N=1101)

Variable	Model A	Model B	Model C
	Control Variables	Independent Variables	All Variables
Democrat	1.72*** (.115)		1.69*** (.153)
Strong Religious Affiliation	.407*** (.106)		.327*** (.142)
Age (Continuous)	.979*** (.003)		.992 (.005)
White	.738** (.125)		.722 (.172)
Has Degree or Higher	1.09 (.114)		.883 (.156)
Male	1.41*** (.105)		1.37* (.158)
Internet use on Weekday- Hours		1.03 (.027)	1.02 (.525)
Internet use on Weekends- Hours		1.05 (.029)	1.05 (.146)
Use Classmates		1.24 (.275)	1.31 (.296)
Use Facebook		1.32 (.168)	1.55* (.183)
Use Flickr		.962 (.372)	.905 (.397)
Use Google+		.957 (.133)	1.03 (.144)
Use Instagram		1.09 (.158)	1.11 (.567)
Use LinkedIn		1.1 (.144)	1.06 (.162)
Use Pinterest		.81 (.134)	.965 (.158)
Use Snapchat		1.23 (.170)	1.2 (.187)
Use Tumblr		1.83 (.333)	1.57 (.359)
Use Twitter		1.05 (.178)	1.01 (.193)
Use Vine		.824 (.33)	.695 (.346)
Use Whatsapp		.802 (.185)	.733 (.204)

Note. Odds Ratios. Standard Error are in parentheses. *p < .05. **p < .01. ***p < .001.

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- B.A. Double Major in Criminal Justice and Sociology, 2016
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The National Leadership Honor Society (ODK), March 2015
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- Graduate Assistant**, 2016 – 2018
 Sociology & Criminal Justice Department, Old Dominion University, Norfolk, VA
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