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Undergraduate

Addressing Counter-arguments and Possible Solutions in Marijuana Legalization

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Abstract

Marijuana came to the United States as a result of Mexican immigration, and was criminalized in the 1920's by the Federal Bureau of Narcotics. Since its prohibition, marijuana was never thought of until it's reappearance in the 1960's when it became popular among US college campuses. The drug help set the stage for questioning what it meant to respect authority on the governmental and individual level. Today, many states have allowed medical marijuana use and a handful have allowed its recreational consumption. Marijuana is becoming an increasingly hot topic among the public due to the multitude of studies that are finding its benefits; however, anti-marijuana groups are pushing for

the plant's continued illegalization because of legitimate concerns such as crime rates, minor consumption, and adverse health risks. This paper explores the validity of these arguments, current research findings, and discusses possible solutions to solve the intricacy of marijuana legalization.

Keywords: marijuana, legalization, arguments, research, solutions

Marijuana has been criminalized since the late 1920's due to a plan orchestrated by the Bureau of Narcotics (FBN), which aimed to restrict its importation, consumption, and sale. This focused effort resulted in the plant fading from the spotlight until the early 1960's, when its popularity began to soar. Today, four states and the District of Columbia have legalized recreational marijuana use and nineteen additional states have passed laws that permit the use of medical marijuana. Although permitted in some form in these twenty three states, it is still a violation of Federal law to possess marijuana, due to its classification as a Schedule I drug under the Controlled Substances Act. Despite its classification, marijuana's increasing popularity, combined with an increasing demand for legalization, calls for an examination of why the plant is illegal in the first place. The purpose of this paper is to examine the validity of these arguments, as well as provide possible solutions to the complex issue of legalization.

Many anti-marijuana groups, such as American Society of Addiction Medicine (ASAM), National Association of Drug Court Professionals (NADCP), Citizens Against Legalizing Marijuana (CALM), Smart Approaches to Marijuana (SAM), Parents Opposed to Pot (PoP), and National Families in Action (NFIA), and many more, argue that the legalization of recreational marijuana will lead to easier access and increased use among minors. A study published in October 2014 in the Journal of Adolescent

health found that marijuana use does not increase. The study was conducted by Choo, Benz, Zaller, Warren, Rising, and McConnel (2014) who looked at a population sample of 11,703,100 students between 1991 and 2011; the students were varying ages, but they all resided in states that had medical marijuana legalization laws. They found past-month marijuana consumption was common (20.9%), but there was no significant statistical differences in use before and after marijuana policy changes for any state. Choo et. al. (2014) also did not find any overall increased probability of marijuana consumption related to the policy change in the regression analysis. Even though this study examines medical marijuana, the concern of minors having access to the plant is very limited. In a state where getting a medical marijuana card is fairly easy for anyone twenty-one and older, minors will turn to previous connections for the drug instead of asking from older siblings, relatives, etc. The real concern comes from the mentality among youth that marijuana is a safe drug to consume, which is not the case for developing minds (Gary, 2014). A study conducted by Loyola Medicine says that early use can lead to lifelong addiction and damaging developmental changes such as impaired thinking, increased likelihood of dropping out of school, and poor educational outcomes (Gary, 2014). Whether it is medical or recreational marijuana, there is a solution to youth consumption. Educational talks about the impact

of marijuana on developing brains need to be implemented as a result of legalizing recreational marijuana. Like sex education and domestic violence, teaching minors about the consequences of marijuana can have a profound effect. Relating sex education in schools and marijuana prohibition, a study conducted by Kathrin F. Stanger-Hall and David W. Hall (2011) found states with abstinence-only programs in public schools have drastically more teenage pregnancy and birth rates than schools with more comprehensive sex education programs. Like marijuana prohibition, minors are more likely to engage in risky behavior the less they are educated about said behavior. The power of education can show middle- and high-schoolers the repercussions of marijuana consumption at an early age which can deter the behavior.

Another concern expressed by anti-marijuana groups is the notion that crime will increase. This a very reasonable concern, especially with the Mexican drug cartels committing horrible acts as a result of the drug war. However, a recent study conducted by Morris, TenEyck, Barnes, and Kovandzic (2014) found crime was not exacerbated by the passing of medical marijuana laws in Part I offenses such as rape, homicide, robbery, burglary, assault, auto theft, and larceny. Morris et. al. (2014) did find the laws may be correlated with reductions in assault and homicide rates. Additionally, Smith, Homish, Collins, Giovino, White, and Leonard (2014) at University of Buffalo sampled

634 couples in their first nine years of marriage who consumed marijuana. They found of the 634 couples tested, the more the couple smoked marijuana, the less likely they were to commit domestic violence acts (Smith et. al., 2014). The researchers also found the study supports the notion that marijuana does not increase aggressive conflict and it may actually decrease the instances (Smith et. al, 2014). Marijuana commonly “mellows out” its users where violent acts are not carried out; this would indicate the main source of crime is a direct result of drug trafficking, not consumption. However, the crimes come from acquiring the drug and its suppliers.

A main source of marijuana comes from Mexico as a result of the plant’s ban and criminalization in the early 1900’s; the Mexican drug cartels used existing trade routes for cocaine and heroin throughout the United States to start smuggling marijuana (McDiarmid, 2015). RAND, a nonprofit organization for research and analysis for US armed forces, calculated national estimates of illegal market sizes for four illicit drugs (cocaine (and crack), methamphetamine, marijuana, and heroin) between 2000 and 2010. Of the \$100 billion total drug estimate, \$40.6 billion is from marijuana and those who consume it daily/near daily make up 80% of total expenditures (Kilmer, Everingham, Caulkins, Midgette, Pacula, Reuter & Lundberg, 2014) This illegal market can be reduced by 41% due to marijuana legalization, and we can decrease the

amount of nonviolent drug charges by 46% (Drug War Statistics, n.d.). With recreational marijuana legalized in just four states, evidence of this change is already appearing (Grillo, 2015). The U.S. Border Patrol has been noticing a steady decline in marijuana seizures, from 2.5 million pounds in 2011 to 1.9 million pounds in 2014. Mexico's army has seen a drastic decline in marijuana confiscation, dropping 34% compared to the previous year (Grillo, 2015). Some may attribute to law enforcement, but evidence is showing it is due to the five U.S. states that legalized recreational marijuana. The industry grew 74% in 2014 to \$2.7 with projections of reaching \$4 billion by 2016, which means less income for the Mexican cartel to acquire guns, assassins, and bribe the police. Along with legalization, Mexico is seeing a decrease in crime, specifically homicides; homicides were at a high in 2011 with 23,000 murders reported, last year, there were 15,649 reported murders (Grillo, 2015). Even though this is the tip of the iceberg, marijuana reform is already affecting the black market and Mexico just after three years of recreational legalization. If marijuana is federally legalized, not only will crime rates decrease, but the amount of money spent and generated on its illegal demand will be reduced drastically.

The last argument for keeping marijuana illegal is its health risks and concerns. Most of the experiments concern minors who will not be able to buy recreational marijuana until

they are twenty-one. These findings are also inconsistent because of other third variables unaccounted for such as socioeconomic status, mental health, and parental relationships; but it should not be ignored that there is serious health effects for consumption in youth. When directed to individuals who are twenty-one and older, although limited, the findings point to possible benefits of marijuana consumption in some diseases. Haj-Dahmane and Shen (2014) of University of Buffalo found there may be actual medical marijuana use for treating depression. They explained chronic stress reduces the production of endocannabinoids in the brain which is not only a chemical produced by the brain naturally, but an active ingredient in marijuana (Haj-Dahmane & Shen, 2014). However, the use was only studied in animal models and the next step is to see if it restores normal behaviors in animal models without leading to drug dependence. Another way to explore the treatment of depression and marijuana use is to conduct a longitudinal study focusing on age of use onset, consumption rates, duration of use, and level of depression. A longitudinal study could give a wider scope on long-term effects of marijuana and depression.

Marijuana also shows potential in treating autoimmune diseases and anxiety reduction in several studies, however, a couple studies found that it may not be as effective in treating some neurological diseases (Yang, Hedge, Zhang & Nagarkatti, 2014; Ramikie,

Nyilas, Bluett, Gamble-George, Hartley, Mackie, Watanabe, Katona & Patel, 2014; Koppel, Brust, Fife, Bronstein, Youssof, Gronseth & Gloss, 2014; Koppel et. al., 2014). An interesting study conducted by Jouanjus, Lapeyre-Mestre and Micallef (2014) identified 35 cases of vascular and cardiovascular conditions related to brain, heart, and limbs. They found marijuana use resulted in heart-related complications, and even death, where the sample was an average of 34.3 year old males and had marijuana-related cardiovascular complications (Jouanjus et al., 2014). However, this study has some limitations to it; cannabis exposure ranged from actual (8 patients), recent (6 patients), and regular/daily use (16 patients)— a total of 30 cases— and the duration of use was only available in five cases that ranged from two to more than 25 years. Toxicology reports were conducted in thirteen cases with ten cases of THC positive; however, marijuana can stay in the system for up to two months, depending on duration of use, because THC is fat-soluble. As a result of the limited sample of cannabis use, it is proper to not correlate marijuana use as a direct cause of cardiovascular complications, and even death (Jouanjus, 2014). However, current research that explores possible solutions in the treatment of neurological diseases and cardiovascular conditions in relation to marijuana use are non-existent. The inconsistencies of these research findings makes it hard to ignore some of the possible

risks in marijuana use, however, all of the studies are looking at the consumption of marijuana via smoking and a major active ingredient delta-9-tetrahydrocannabinol (THC).

Little to no research has been done on other ways of consuming marijuana, such as ingestion or transdermal, and another active ingredients such as cannabidiol (CBD), which makes up 40% of the plant's extract (Campos, Moreira, Gomes, Del Bel & Guimarães, 2012). In order to fully understand the potential hazards of marijuana, research is needed exploring the different strains, active ingredients, and ways of administration because technology for marijuana growing methods and consumption are growing rapidly. Marijuana's actual benefits and possible risks will come to light once more in-depth research about all active ingredients and administration methods are thoroughly conducted.

There are anti-marijuana groups advocating for continued criminalization of marijuana, but an increasing amount of current research studies have findings that implicate otherwise. For instance, based on previous experiments, minor consumption has not significantly increased or differed from the consumption rates before the legalization of marijuana, but awareness should be brought to light about its health risks. Studies are showing minors are consuming marijuana because it is perceived as a safe drug, but research is pointing towards chronic adverse health effects. To deter underaged

use, education about marijuana effects in the developing brain need to be utilized. Another concern was an increase in crime rates. Not only may crime rates decrease, the illegal drug market for marijuana will be reduced by 41% (\$40.6 billion) and nonviolent drug charges will be cut by 46% with changes already occurring with just . Lastly, there are numerous adverse health effects when consuming marijuana. While neurological diseases and heart complications seem to have no medicinal benefit to marijuana consumption, there are consistent findings in other studies such as depression and anxiety. In order to fully understand the limits of what marijuana can help treat and maintain, further research needs to be conducted exploring all administration methods and major active ingredients due to changing method technologies of marijuana growing and consumption. The consistent findings about the benefits of marijuana consumption is gaining popularity and public favors rapidly, and demands for marijuana legalization has been higher than before. This alone is proving the need to reevaluate marijuana prohibition laws and showing there are possible solutions to solve this complex issue of legalization.

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Marielle Rizon is a fourth year psychology major hoping to get a Master's in Museum Studies once she graduates this May; she hopes to become a curator to educate the public on cultural influences. As a marijuana enthusiast, she wrote the paper to advocate how economically and financially savvy it would be for federal legalization, or even rescheduling of its classification. In her free time, she becomes lyrically enlightened through rap music and archives war memorabilia at Castle Air Museum. You can find Marielle working in the UC Merced Art Gallery or rapping along to her favorite songs in the car.

