

# United States drug policy: The scientific, economic, and social issues surrounding marijuana

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**The United States currently enforces one of the harshest drug policies in the world. This policy has been directly linked to increases in nonviolent incarceration rates and racial profiling by law enforcement. This report examines the current “War on Drugs” in terms of three issues: the scientific findings on marijuana regarding its medical viability, lack of addictive properties, minimal behavioral and health consequences, and zero annual death-rate; the unsustainable economic costs of enforcement, convictions and incarceration compared to treatment and rehabilitation programs; and the social implications of racially targeted enforcement efforts directly contributing to minority over-representation in stop-searches, arrests, convictions, and incarcerations for nonviolent, drug-related offenses. This meta-analysis of the War on Drugs culminates with a request to revisit U.S. policies towards marijuana, to refocus drug enforcement on treatment for drug-related crime, addiction, and abuse, and to re-educate law enforcement officials to reduce the drastic racial disparities currently present in arrest rates through an understanding of drug usage across ethnicities.**

## Effects of the Current Drug Policy

The United States government currently implements one of the world’s harshest programs related to the use of illicit substances—the “War on Drugs.” Arrests, convictions, and incarceration rates have skyrocketed in the U.S. since the implementation of this policy in the 1980s. Despite only comprising 5% of the global population<sup>1</sup>, the U.S. currently holds one-quarter of the world’s incarcerated population<sup>2</sup>, largely due to arrests for nonviolent, drug-related offenses. Additionally, there is striking evidence of discriminative enforcement against African Americans and Hispanic Americans, who currently account for over 85% of arrestees in some states<sup>3</sup>. Non-white drug offenders also account for nearly 75% of all drug offenders in U.S. prisons<sup>4</sup>. The increased arrest rates, targeting of minority citizens, and immense allocation of federal spending for the War on Drugs necessitates an examination of its legitimacy.

A comprehensive review of scientific research on marijuana, economic models of the costs and benefits of drug prohibition, and writings on the social effects of the War on Drugs reveal that this policy is based on false premises and misrepresented scientific findings, is an unnecessary drain on the United States economy, and is

resulting in unconstitutional and excessive legal sanctions against U.S. Hispanic and African American minorities. While this report will not offer a formal outline of necessary drug policy changes, this analysis of the War on Drugs will address its current implications for American society.

The first portion of this report offers an examination of scientific findings on marijuana. These findings undermine the premises of the War on Drugs policies regarding marijuana and debunk common misconceptions regarding marijuana’s “gateway” effects on drug use and lethality. The analysis pulls from scientific findings and laboratory tests performed by a variety of national and private institutions; some of which come from committees appointed by Presidents Richard Nixon and Ronald Reagan in the 1970s and 1980s.

Next, an analysis of the economic costs of enforcement, convictions, and incarcerations will demonstrate the War on Drugs’ excessive drain on the economy. Support for this claim will be drawn from data presented by the first director of the National Institute on Drug Abuse on costs of the War, as well as a study conducted by Michael Grossman and colleagues on the elasticity of drug consumption based on price since the 1970s. The impact of the reduced instance of court-ordered reha-

bilitation brought on by the War on Drugs’ zero-tolerance, minimum sentencing, and three-strike policies is explored and compared with the implications of the current Dutch policy regarding marijuana.

Finally, a review of drug-related arrests, convictions, and incarceration records demonstrates stark evidence of racial discrimination against Hispanics and African Americans. The analysis of the demographics of drug users, arrestees, and convicts will include quantitative data from government self-report surveys on use, as well as private studies conducted on drug-testing results in the military and the workplace. Included in this analysis are self-report data collected by the National Institute on Drug Abuse from various middle and high schools throughout the United States. Arrest rates will be drawn from multiple studies on the law enforcement, including both findings from public records and personal testimonies from judges and police officers.

The investigation culminates in a discussion of U.S. drug policy and identification of necessary changes in the current policy regarding federal marijuana sanctions to more accurately reflect the scientific data regarding the drug, to increase alternative punishments for nonviolent drug crimes and consequently reduce both economic costs and the instance of drug-use relapse, and to better educate law enforcement officials to combat racial profiling. This concluding section will also include a consideration of the weaknesses and limitations of this study, and outline avenues for future research.

## Marijuana Use and Effects

This paper focuses specifically on the United States’ War on Drugs policies regarding marijuana, since marijuana is unquestionably the most widely used illicit substance in the world today<sup>4,5-11</sup>. Marijuana use is prevalent in American society, more so than any other illicit drug. Figure 1 shows U.S. Department of Health and Human Services data on the use of alcohol, cigarettes, marijuana, and non-marijuana illegal drugs by individuals within the year and month preceding the survey. As illustrated by the graph, nearly one in five U.S. adults has admittedly used marijuana within the past year. Furthermore, the use of marijuana in the past year exceeds the use within the year of all other illicit drugs combined. The use of marijuana in the past month (one of every ten adults) is also far greater than for

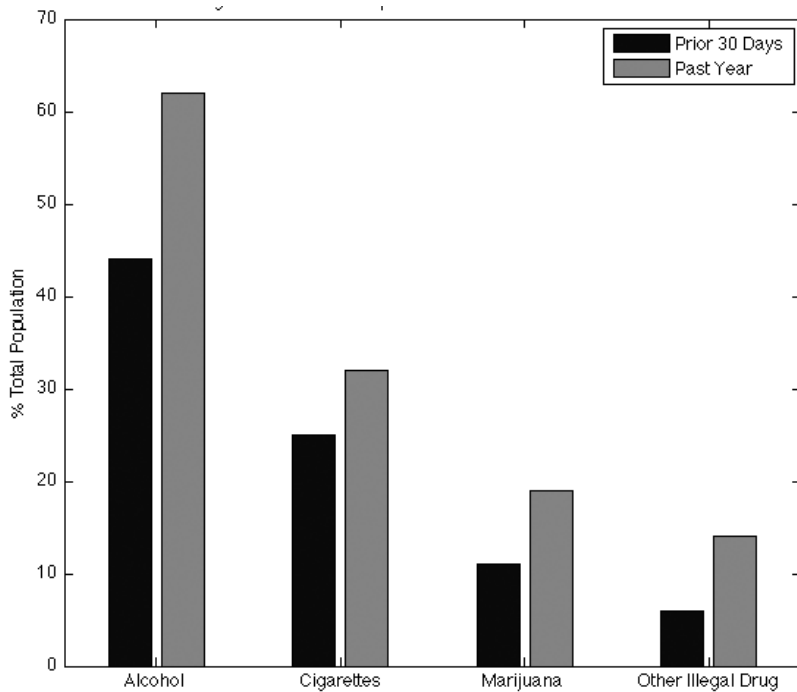


Figure 1. 2010 U.S. Population Substance Use<sup>27</sup>

all other illicit drugs. Usage within the past month is commonly regarded as “regular” use, and thus presents a particularly important variable for drug policy literature on marijuana.

Research suggests that first exposure to marijuana use for U.S. citizens is likely to occur during high school. A 30-year study conducted on nationally-representative samples of high school seniors, summarized in Figure 2, has led to estimates that three-quarters of current adults over age 18 in the U.S. have tried marijuana at least once during their lives<sup>9</sup>. Because illegal drugs are selectively marketed to youths<sup>4</sup>, the fact that usage numbers in high schools are twice the population average is unsurprising. Even with elevated drug exposure, however, high school seniors currently display minimal past-year use of cocaine and heroin (approximately 5% and 1% respectively). Marijuana and other illicit drug usage among high school seniors has remained reasonably constant in the U.S. since the 1990s (see Figure 2), despite the introduction of legalized medicinal marijuana distribution and decriminalization in several states.

Because of marijuana’s prevalence of use, as well as its seemingly equal use across ethnicities<sup>9</sup>, marijuana is an optimal focus for a study on the effects of the current War on Drugs. Marijuana is also the most widely tested and historically analyzed illicit drug to date, and thus represents the greatest avenue for accurate analysis of the scientific, economic, and legal implica-

tions of the War on Drugs. Furthermore, marijuana is perceived by students at the 7th through 12th grade levels as being the most easily accessible drug, further heightening the importance of investigating its potential harms to U.S. citizens<sup>10</sup>.

**Drugs: The “Science” Behind the Schedule**

The United States Drug Enforcement Administration (DEA), in an effort to formu-

late clear, identifiable sanctions against the use, possession, and sale of certain chemical compounds, produced a federal “Drug Schedule” of rankings from 1 to 5. Where a substance fell in this schedule was supposed to be a reflection of its threats to the well-being of the American citizenry. Schedule 1 chemicals allegedly serve no medicinal function and pose high risks of addiction and abuse. Schedule 2 drugs serve some medicinal purpose, but are also highly addictive. Drugs in Schedules 3-5 all serve medicinal purposes, but have decreasing levels of risk related to addiction and abuse. Alcohol, nicotine (tobacco), and caffeine were not placed in this schedule<sup>11</sup>.

Scientific research on the dangers of each substance should inform its scheduling placement. However, these decisions were not made by scientific researchers or medical experts. Rather, these choices were left to the discretion of the United States Justice Department, Attorney General John Mitchell, and the Bureau of Narcotics and Dangerous Drugs during the development of the Controlled Substance Act of 1970<sup>5</sup>.

Research on marijuana’s chemical properties, as well as its medicinal and recreational uses has, throughout history, challenged the categorization of this substance by the federal government as a Schedule 1 drug. In fact, between 1840 and 1900 “more than 100 articles about the therapeutic value of cannabis were published in Europe and North America”<sup>25</sup> alone. With instances dating as far back as the

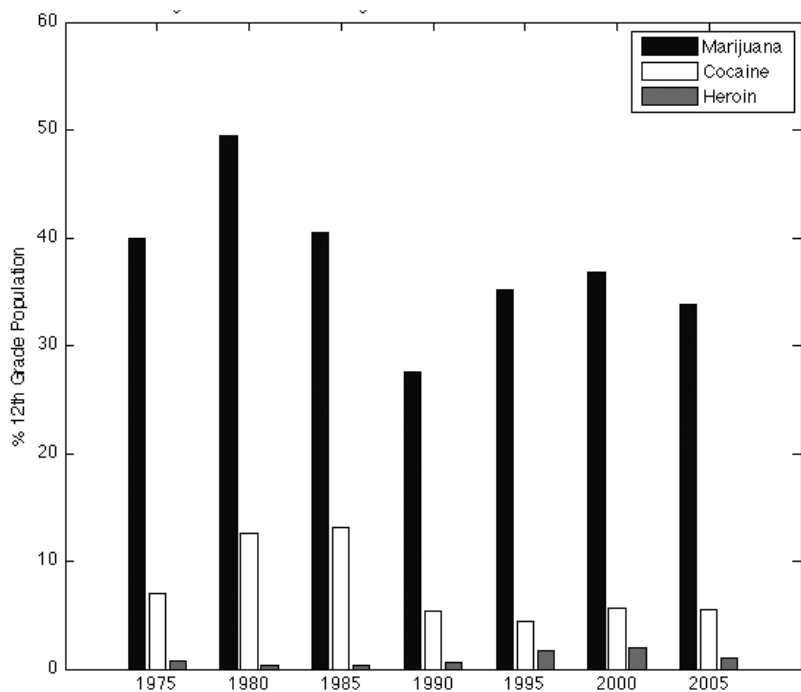


Figure 2. 12th Grade Drug Use in U.S. from 1975 to 2005<sup>9</sup>

first century A.D., marijuana has been used medicinally in China, India, the Middle-East, Central Asia, Greece, Rome, Africa, Europe, and America. Cannabis is also currently being used in various states across the U.S. to treat ailments such as nausea from chemotherapy, wasting-syndrome in AIDS victims, optical pressure from glaucoma, depression, anxiety, and insomnia, among many other afflictions<sup>5,8,11</sup>. Historic and current medical practices and reports support the argument that marijuana has legitimate medical purposes. These practices and reports directly rebut the assertion implied by the DEA's Drug Scheduling that marijuana lacks medical value.

The second criterion for categorization as a Schedule 1 drug is that risks of addiction and abuse are too high to merit legal distribution or prescription by doctors. Addiction refers to drug use that adversely affects the user's social standing, ability to perform civil duties, and capability to reduce or eliminate use despite a desire to do so<sup>5</sup>. An addicted individual is compelled to continue their high-usage of a substance despite negative consequences he or she faces from using the drug.

Addiction often occurs through tolerance or dependence, in which the chemical composition of bodily functions becomes so familiarized to the presence of a drug that stopping use results in adverse physical and psychological reactions. These reactions, called withdrawals, range in severity from mood swings to organ malfunctions. A current scientific study investigated the severity of addiction and withdrawal across six psychoactive drugs (caffeine, nicotine, alcohol, heroin, cocaine, and marijuana). This study concluded that marijuana and caffeine were the least addictive of these substances, asserting that marijuana is "slightly less addictive than caffeine."<sup>8</sup>

Other arguments for the placement of marijuana as a Schedule 1 drug highlight the negative consequences associated with marijuana use, such brain damage, biological defects, deviant behavior, and crime. Harry Anslinger, the first Commissioner of the Federal Bureau of Narcotics, issued a statement that marijuana "addicts" accounted for "fifty percent of the violent crimes committed...by Mexicans, Turks, Filipinos, Greeks, Spaniards, Latin-Americans and Negroes."<sup>8</sup> Noticeably absent from Anslinger's list of "violent criminals" are whites. Claims that marijuana causes violent behavior have been refuted

in numerous studies conducted by independent researchers, national scientific organizations, and presidential commissions throughout the 20th and 21st centuries<sup>5,8</sup>. In fact, marijuana has been proven, in numerous controlled scientific experiments, to reduce aggressive behaviors, even among those addicted to harder drugs<sup>8</sup>. In addition, there is a wealth of reports on valid empirical studies refuting the claims of brain damage, biological defects, and criminal activity<sup>5,8,11,12,13</sup>.

A further example of a fictitious detrimental effect of marijuana use is the "gateway theory," which suggests that the use of marijuana leads to experimentation with more dangerous illegal drugs. This argument is based upon government reports, such as the 1994 Center on Addiction and Substance Abuse report which stated that marijuana users were 85 times more likely than non-marijuana users to try cocaine<sup>14</sup>. These assertions were based on statistics of marijuana use by cocaine users and non-users, which indicated that 17% of marijuana users also tried cocaine, compared to the 0.2% of cocaine users who had never used marijuana<sup>8</sup>. This comparison does not accurately depict drug use motivations. Not only is marijuana the most widely used illegal drug, but it is also the least dangerous and most readily accessible, according to self-report data from U.S. youths<sup>10</sup>. The fact that 0.2% of cocaine users have never used marijuana simply reflects a logical usage progression, not a predisposition

resulting from marijuana use. In fact, less than 1% of people who have used marijuana currently use cocaine<sup>8</sup>.

Another important consideration for the enforcement policies regarding marijuana is the number of deaths caused by its use or abuse. This is one of the most unfounded pieces of evidence used to support current law enforcement policies, as deaths directly associated with the abuse and overdose of marijuana have not been documented in any historical record<sup>5,6,8</sup>. Estimates of death directly related to the abuse or overdose of tobacco, alcohol, and marijuana are displayed in Figure 3. The estimated annual death rates associated with the use of tobacco and alcohol in the United States are 430,000 and 80,000 respectively. While these substances are excluded from the Federal Drug Schedule, marijuana—among the highest scheduled substances—has zero instances of death annually due to abuse or overdose. In fact, laboratory research findings indicate that an individual would have to consume over 10,000 marijuana cigarettes within a couple of hours in order to reach lethal levels of THC<sup>5,8</sup>—a feat that can reasonably be deemed impossible.

It appears that marijuana, contrary to assertions by government officials and the DEA, does not fit either requirement for Schedule 1 categorization and does not cause detrimental health problems, induce criminal behavior, or cause death. Despite these glaring contradictions between the

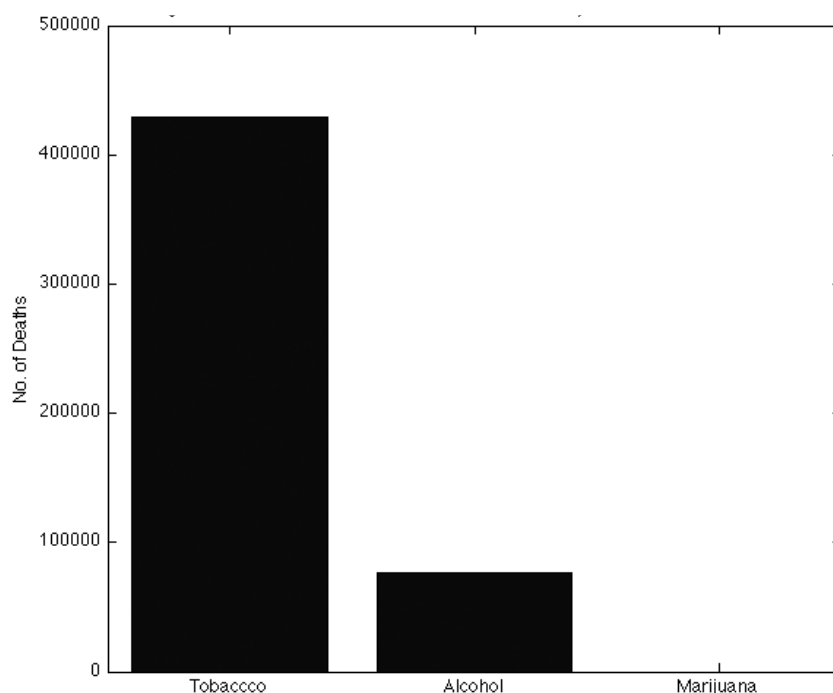


Figure 3. 2010 Annual U.S. Preventable Death Rate by Substance<sup>27</sup>

federal policy guidelines and scientific data, a panel of three law judges in the U.S. District Court of Appeals in Washington, D.C. decided in 1994, when presented with evidence for the rescheduling of marijuana, that “in their opinion [marijuana] has no medicinal value—none.”<sup>5</sup> Since 1994, 16 states have legalized medicinal marijuana, yet marijuana continues to be inappropriately categorized as a Schedule 1 drug.

### The Market: Implications of Marijuana’s Removal from the Black Market

One argument for the continued prohibition of marijuana is that usage will increase if the substance can be legally purchased. Some officials claim that legalization of marijuana would increase use due to a reduction in price brought forth by the removal of risks involved in production and distribution<sup>4</sup>. These assertions have been challenged by researchers like DiNardo and Lemieux, who assert that decriminalization of marijuana throughout the U.S. has shown no effect on the prevalence of marijuana use for states that have enacted these policies<sup>15</sup>. Evidence against the price-sensitivity of marijuana use can be found in the Netherlands, where marijuana possession, sale, and use were recently legalized. Despite two decades of government-sanctioned marijuana sales, use among youths and young adults continues to be lower than in the United States<sup>8</sup>.

Unlike the U.S., the Netherlands chose to decriminalize marijuana, and make it available to the general public through regulated dispensaries. Dutch society had not always accepted marijuana use, nor has it elected to legalize all drugs. This is a society that considered the evidence, implemented policy change, and has not experienced drastic negative consequences. In fact, the use of hard drugs among Dutch citizens is significantly lower than among American citizens, according to self-report data from each nation<sup>16,17</sup>. Furthermore, according to self-report surveys conducted in 1994, Dutch youths aged 12 to 19 were nearly six times less likely to use cocaine than American youths of the same age range<sup>8</sup> (see Figure 4). The vast disparity displayed in Figure 4 has resulted from the removal of marijuana from the same market as harder drugs such as cocaine and heroin, thus eliminating chance exposures to these harder drugs when an individual seeks to obtain marijuana<sup>4</sup>.

Current costs for funding the War on Drugs are estimated between \$26 and

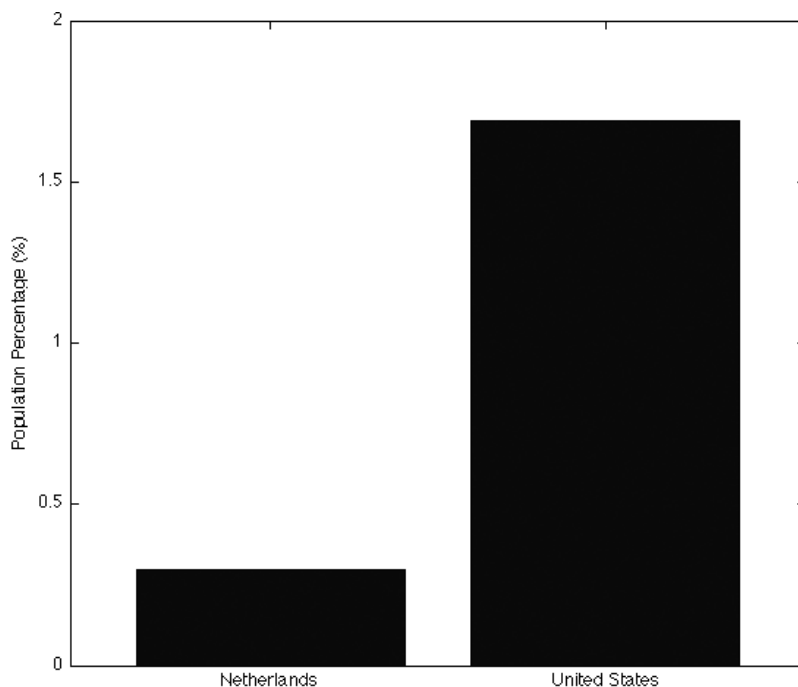


Fig. 4 1994 Cocaine Use for Youths Aged 12-19 in U.S. and Netherlands<sup>16,17</sup>

\$58 billion annually, including enforcement efforts and incarcerations<sup>4,6</sup>. The funding requirements for continued enforcement use resources with little potential for revenue returns to the government or its citizens. Add to these costs the money required for drug education programs—estimated at around \$1.3 billion in 2001<sup>18</sup>—and treatment facilities, and it becomes clear that America is dumping money into a system which has failed to display any significant deterrence or reduction in illegal drug use by either the country’s youth or adult populations<sup>9,10,19</sup>.

By contrast, government-sanctioned taxation and distribution of marijuana in the Netherlands has effectively provided the country with tax revenue to support drug education and treatment facilities, while also eliminating the costly processes of police training, enforcement, arrests, legal trials, and incarcerations<sup>8</sup>. Drug education programs in the Netherlands teach tolerance-based, responsible use of drugs, unlike the zero-tolerance, “Just-Say-No” approaches coined in the 1980s and still used today in the U.S. These foreign strategies to education, accompanied by the societal acceptance of responsible drug use, have undoubtedly contributed to the lower rates of use and abuse found in self-report data collected from Dutch youths<sup>16</sup>.

Another issue presented by the War on Drugs is the increase of incarceration rates in relation to court-ordered drug treatment programs. Data from the Substance Abuse and Mental Health Services

Administration, as well as work conducted by Delaney and colleagues, indicate that court-issues treatment facilities save taxpayers 3-1 for in-patient rehabilitation, and upwards of 13-1 in out-patient rehabilitation compared to the expenses required for incarceration<sup>18,20</sup>. Further benefits of rehabilitation programs suggested by these studies include a reduction in the instance of positive urine-analysis drug screens and a nearly 20% reduced rate of re-arrest within six months after release from rehabilitation programs (compared to those released from prison facilities).

### Demographics: Arrests, Convictions and Incarcerations

In the U.S., African Americans and Hispanics are perceived to constitute the majority of the drug-using population. Police officers across the country have openly admitted to “rational racial profiling” in stop-searches of minority civilians during routine traffic stops, claiming that disproportionate searches between races are the “unfortunate byproduct of sound police policy.”<sup>21</sup> A likely result of the selective targeting of minority groups is the fact that African American men are five times more likely to enter prison than their white male counterparts<sup>22</sup>. The practice of rational profiling fuels these continued disparities. Citizens from a racial minority group are more likely to be arrested than their white peers, more likely to be convicted of drug offenses during criminal trial, and more likely to receive severe punishments from

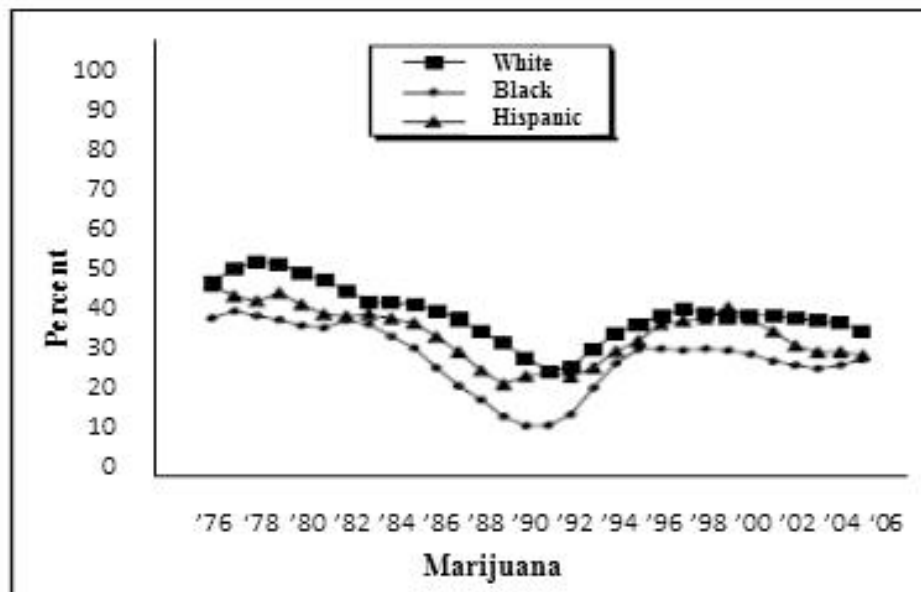


Fig. 5 7-12<sup>th</sup> Grade Population Marijuana use in the U.S. from 1975 to 2006<sup>9</sup>

court officials.

Statistics gathered from the U.S. Department of Health and Human Services in 2010 indicate that just over 18% of Americans admittedly used marijuana in the past year. Nearly 11% admitted to use in the 30 days preceding the survey<sup>10</sup>. But what is the ethnic composition of these users? In national surveys conducted on the employees of several corporations who decided to institute urine-analysis drug screens, lifetime marijuana use was significantly lower in almost every age category for both Hispanics and African Americans than in the white populace<sup>23</sup>. Wright and Rogers estimate that African Americans account for approximately 12% of the United States' "regular drug users," while also comprising approximately 13% of the entire U.S. population<sup>25</sup>. Survey data gathered from American students in 7th through 12th grade display lower usage of both licit and illicit drugs in the African American students, as well as lower rates of marijuana use in the Hispanic populations compared to white students for almost every year since 1975<sup>9</sup>. Figure 5 graphically displays marijuana use trends across these racial categories.

The available data suggest that claims of higher marijuana usage among minority populations are unsubstantiated and misleading. Instances of prejudiced police action, such as those discovered by Andrew Golub in his analysis of New York City's police records—where African Americans comprised 51% of traffic stops despite only composing 26% of the population—further display the bias plaguing

police efforts<sup>3</sup>. Similarly, Maryland police records of stop searches show that 70% of those stopped are African American, while this ethnicity only accounts for 17% of drivers in Maryland<sup>21</sup>. These disparities provide clear evidence of highly discriminatory law enforcement practices disadvantaging minorities.

Beyond the heightened occurrence of stops, searches, and arrests, African Americans and Hispanics also face further disadvantage in court proceedings. These minority groups experience elevated rates of pre-trial incarceration, hindering their ability to formulate a proper defense, impacting employment and family lives, and further enforcing the false image of their culpability<sup>23</sup>. African Americans are subjected to significantly higher rates of conviction for drug offenses, higher rates of incarceration, and elevated severity in punishment sanctions than their white drug-offender counterparts<sup>24-26</sup>. Hispanics face similarly heightened likelihood of incarceration and severity in punishment, especially when their offense occurs in an area with a large racial minority population<sup>26</sup>. When not facing incarceration, these groups are subjected to harsher monetary sanctions despite their generally lower socio-economic statuses, often resulting in the acquisition of their property upon failure to provide payments to the courts<sup>25</sup>.

While it may be premature to accuse racism as the cause for these disparities, the evidence makes it difficult, if not dishonest, to rule it out completely. From selective pursuit of minorities by police to harsher criminal sanctions in the court

room, it is clear that African Americans and Hispanics carry the greatest burdens of the societal and economic harm brought forth by the War on Drugs. The effects of such blatant targeting likely "exacerbate tension between racial minorities and law enforcement agencies," further fueling the instance of deviant behaviors and social backlash from these disenfranchised populations<sup>22</sup>. In essence, racial profiling may itself be providing the War on Drugs self-reinforcing behavior from minority and police entities, resulting in the statistics used in claims of enforcement effectiveness and the rationality of continued profiling strategies.

My research has three major implications. First, marijuana has no place among Schedule 1 drugs according to the DEA's own guidelines. Second, the enforcement costs of the War on Drugs coupled with the concurrent increase in incarcerations in relation to court-ordered rehabilitations are draining exorbitant amounts of U.S. tax revenue from the federal budget. Finally, police stops, arrests, convictions, and incarcerations of African Americans and Hispanics are disproportionately large in comparison to the portions of the drug-using population these ethnicities constitute.

These findings call for a reconsideration of drug enforcement policies regarding marijuana. Because of the scientific findings for marijuana regarding medical uses for nausea, wasting-syndrome, optical-pressure reduction, etc., as well as a lack of evidence to support claims of addictive properties, marijuana is a substance that should not be addressed with criminal sanctions, especially the severe sanctions for Schedule 1 drugs. Furthermore, in contrast to the annual death rates associated with abuse or overdose of alcohol and tobacco (Figure 3), there are no identifiable cases of death directly related to the abuse or overdose of marijuana. Yet alcohol and tobacco may be sold legally to citizens above a certain age, while marijuana may not<sup>27</sup>. Although an argument for complete legalization of marijuana is beyond the scope of this paper, this research opens an important conversation to be addressed with further investigation into the consequences of regulated, taxed sale of marijuana on crime, death rates, and deviant behavior.

In contrast to the zero-tolerance and minimal-sentencing laws of the War on Drugs, the monetary, criminal, and so-

cial benefits of rehabilitation-focused approaches to drug treatment and punishment make these treatment-based court sanctions necessary in the United States' fight against drug abuse and addiction. The reduction in costs related to housing, processing, and feeding jail and prison inmates that results from placing these individuals in care facilities would provide large savings in federal tax revenues. Additionally, the significant reduction in re-arrest rates and drug usage relapses from successful treatment cannot be ignored. Evidence of these benefits can be drawn from the current Dutch model of drug treatment, which is funded almost entirely by the tax-revenue generated from legally sanctioned marijuana sales.

Lastly, the drastic disparity between arrests, convictions, and incarcerations of Hispanics and African Americans and the statistical use of drugs by these populations provides ample evidence of discriminatory practices in drug-related enforcement and judicial sanctioning. These disparities must be addressed with drug-policy reform, and educational material must be provided to law-enforcement officials and judiciary members highlighting these incongruences if this problem is to be resolved. The tensions created between minority populations and legal authorities because of unfounded "rational profiling" cannot be ignored.

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