RUTGERS
New Jersey State Policy Lab

February 2022

Cannabis Legalization in New Jersey: A Baseline Study

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Suggested Citation:

Cannabis Legalization in New Jersey: A Baseline Study. 2022. New Jersey State Policy Lab. New Brunswick, NJ: Rutgers University.

Retrieved from https://policylab.rutgers.edu/projects/

Alternatively, you can cite individual chapters using standard book chapter citation methods.

All of the tables in this report were generated from secondary data.

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We would like to thank the New Jersey State Policy Lab for funding this work. The New Jersey State Policy Lab is an independent research center operated by the Bloustein School of Planning and Public Policy and the School of Public Affairs and Administration at Rutgers University. The Lab thanks the New Jersey Office of the Secretary of Higher Education for its support and funding. The contents of this report do not necessarily represent the policy of the Office of the Secretary of Higher Education and you should not assume endorsement by elected leadership or other employees of the State of New Jersey.Any omissions or errors are the sole responsibility of the author(s).

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Executive Summary

In 2020 and 2021, the New Jersey Legislature passed a series of laws legalizing and decriminalizing recreational marijuana usage. This included S.21/A.21; A.1897/4269; and A.5342. As a result of the legalization and decriminalization of recreational marijuana, it is prudent to assess where the state currently stands on a number of factors related to marijuana usage. In this report, we examine education, health, and law enforcement factors as they relate to youth and adults with respect to marijuana usage directly and indirectly. That is, we include variables that could be impacted by the legalization of recreational marijuana.[1]

However, the information included in this report should be viewed with caution. Much of the data should be considered as baseline data because they were collected from a variety of secondary sources. Hence, it is difficult to establish any substantive conclusions concerning the potential future effects of recreational marijuana/cannabis on public health, law enforcement, public safety, and youth outcomes. In addition, it is not our goal to establish causality with this report, but to provide a baseline that can be used to determine if there will be changes in these factors once cannabis is available in the retail marketplace.

While the report sheds much light on marijuana usage, there are several key findings in each of the three subsequent chapters that merit highlighting. First, marijuana usage in New Jersey is slightly lower than usage across the U.S. -- among men (45.2% NJ, and 48.6%% U.S.) and women (35.8% NJ, and 39.6% U.S.) (Substance Abuse and Mental Health Data Archives 2021). As expected, males' usage outpaced females' by roughly ten percentage points in New Jersey and across the country. Interestingly, based upon the Substance Abuse and Mental Health Data, half of users who initiated marijuana use in the past year were male (49.3%) and half were female (50.7%). The New Jersey data also indicated that between 2016-2019, marijuana usage for adults 26 years of age and older increased, while usage decreased for those 18 to 25 years of age. Finally, marijuana usage among youth (12-17) rose between 2017-2019, from roughly 70,000 to 78,000 youths reporting usage in the prior year. Similarly, across the country, the overall usage rate among youth (12-17) also rose during this period.

The next chapter in the report primarily focused on marijuana-related arrests in New Jersey. Relying upon secondary data sources from the FBI's Uniform Crime Reporting program, the authors noted that the number of cannabis-related arrests for possession in New Jersey were either increasing slightly or were stable until 2015 when they increased dramatically. The total number of arrests for sale/production of cannabis (less than 5,000) was relatively low and stable when

1 For the purposes of this report, we used the term marijuana and cannabis interchangeably.

compared to arrests for possession. Every year between 2010 and 2019, at least 80% of all cannabis-related arrests have been for possession.

The main findings of this chapter are the strikingly large disparities in cannabis-related arrests by age and race. In 2010, for instance, the number of arrests of black residents outnumbered the arrests of white persons by more than five times for selling marijuana. This number was slightly lower in 2019 at four and a half times. The differences in arrest rates for cannabis possession were also high: in 2010, black residents were arrested at a rate that was three times higher than white residents. By 2019, black residents were four times as likely to be arrested when compared to white residents for possession of cannabis.

With respect to age, arrests rates for those 18-20 were considerably higher than any other group, with a sizeable increase in 18–20 year-olds arrested for cannabis possession between 2015 and 2016. For those older than 20 years of age, the arrest data practically remained flat with a very minor increase in 2016 that was sustained through 2019. The arrest data for 18-20 year-olds and 21+ year-olds arrested for sale of cannabis were similarly flat for the 2010-2019 period. Finally, as a point of comparison to impacts associated with alcohol consumption, the number of traffic fatalities in New Jersey for drivers who tested positive for BAC >.08 (Blood Alcohol Concentration) increased since 2015 (Fatality Analysis Reporting System 2021), but these findings need to be considered in light of the significant limitations of the FARS data described in the chapter.

The chapter on health and behavioral services demonstrates that the number of persons 12 years and older admitted into a health care facility for marijuana use decreased over the 2015-2018 period (TEDS 2021); however, there was an increase in heroin usage among this age group. Paradoxically, despite an increase in arrests for younger adults (18-20), the number of older adults (26-50) admitted to treatment facilities increased while those aged 12-25 decreased from 2015-2018 (TEDS 2021). The U.S. trend followed the same pattern. Among adults over 50 years of age, admissions to treatment facilities were relatively low and stable for the four-year period.

With respect to race, similar numbers of black and white marijuana abuse users were admitted into health care facilities in New Jersey, whereas across the country, admissions to health facilities for white users outnumbered black users 2½ to 1 (TEDS 2021). When gender was considered, females represented 24.5% of admissions in 2015 and this number increased to 28.8% in 2018. On the other hand, the percentage of men admitted decreased from 75% in 2015 to 71.2% in 2018. In fact, the data followed a similar trend for men and women in the U.S. (NSDUH 2021).

At the New Jersey county level, drug overdose mortality was considerably higher in the southern part of the state than in central and northern New Jersey. Cumberland, Camden, Salem, Cape May, Atlantic, and Gloucester Counties had dramatic increases in deaths due to drug overdoses between 2016 and 2021. In particular, Cumberland and Salem Counties saw notable increases in the number of deaths. The data also point to high levels of suicides in the southern counties of New Jersey, as compared with the rest of the state. Alarmingly, in the most recent year (2020), there has been an uptick in the number of suicides in the northeastern counties in New Jersey.

Contrary to the needs for mental health support exhibited by the data, the southern counties of New Jersey reported the lowest numbers of mental health care providers.

The final chapter examined educational outcomes and youth school experiences in New Jersey. New Jersey graduation and dropout rates were relatively stable for the 2006-2020 period. In fact, New Jersey had one of the highest graduation rates (91%) in the country and one of the lowest drop-out rates (about 1%) (New Jersey Educational Statistics 2021). With respect to in-school suspensions, the authors found that black youth were suspended at a rate that was more than twice that of any other group in academic year 2018, and the gap widened and the number of suspensions increased in academic year 2019. The data for out-of-school suspensions were very similar to the in-school suspension data. Overall, compared with white students, black students missed more than twice as many days of school due to suspensions in academic years 2016 and 2018.

When examining the data for the type of incidents reported in New Jersey schools between 2011 and 2019, the authors found that the third highest reported infraction was "substances," after "violence" and "bullying and intimidation," which were the two most common types of incidents (New Jersey Educational Statistics 2021). The authors noted that the frequency of "substances" as an incident category increased consistently from academic year 2016 through 2019. In fact, the authors noted that the number of "substance" incidents in New Jersey schools increased dramatically -- from 3,000 in academic year 2016 to more than 6,000 in academic year 2019.

In terms of perceptions, male students were less likely than female students to believe that other students of their same gender used marijuana. Specifically, four in ten (44.7%) male students in New Jersey schools perceived that other male students in their schools used marijuana; similarly, 43.8% of male students in the U.S. had the same perception. In contrast, more than half (55.3%) of New Jersey female students perceived that other female students used marijuana, as did 56.2% of female students across the country (Substance Abuse and Mental Health Data Archive 2021).

The number of youth under age 18 arrested for marijuana offenses decreased dramatically since 2009. In fact, the number of arrests among male students in the state dropped from a high of 4,000 in 2009 to a low of 2,500 in 2019. The trend for New Jersey female students was very low and stable for the 2009-2019 period (Uniform Crime Report 2021).

The authors also examined school-related arrests by race/ethnicity. In academic year 2012, the number of black and white youth arrests were essentially the same. However, the number of white youth arrested in academic year 2014 increased, while the number of black youth arrested decreased. In academic year 2016, the number of black and Hispanic youth arrests far outpaced white youth arrests. These three groups had similar arrest rates in academic year 2018 (Civil Rights Data Collection 2021).

While this summary provides a snapshot of the data included in this report, it seems pretty clear that legalizing recreational marijuana in New Jersey is likely to have an impact on a variety of factors that are critical to the well-being of the state. Although there are clear positive

benefits to legalizing recreational marijuana, we argue that it is incumbent upon policymakers to examine the data in this report closely and create protocols that will minimize the negative impact of recreational marijuana use on active users and non-users. We conclude the report by recommending the collection of quantitative and qualitative data and discussing some of the policy implications of legalizing recreational marijuana for each area under investigation in a health-centered framework. Based on the data collected by other states, it is quite possible to successfully regulate the industry while maintaining protocols that protect the citizens of New Jersey.

Chapter 1
Introduction and History of Cannabis Legislation in New Jersey

Charles E. Menifield and Liliana Ordonez

The purpose of this report is to provide a baseline analysis of several factors that are salient to the passage of laws legalizing recreational marijuana in New Jersey. In 2010, the state of New Jersey legalized marijuana for medical purposes with the passage of *S. 119 The Compassionate Use Medical Marijuana Act. In November 2018*, the New Jersey State Senate and Assembly Judiciary Committees voted to advance legislation that would legalize recreational marijuana. On December 27, 2020, the New Jersey Assembly approved bills that would legalize possession of up to six ounces of cannabis and create the regulatory structure for adult-use-sales, if signed into law (S.21/A.21: and A.1897/4269). On February 19, 2021, the New Jersey Judiciary Committee approved bill A.5342, which addresses penalties for underage use of cannabis. The bill was approved by both houses on February 22, 2021. On February 22, 2021, Governor Phil Murphy signed three bills related to cannabis legislation. These three bills decriminalized cannabis and paved the way for cannabis to be regulated and taxed in New Jersey (see Appendix A1 for a summary of the three bills).

Given the nature of the laws legalizing recreational cannabis use, it is reasonable to assume that that the population at large could be impacted in a variety of ways. To that end, this report focuses on health, public safety and youth usage. Our goal is to provide summary data at the county level when possible, by race, age, and gender. In short, before full implementation and execution of the legislation, future studies should compare this baseline data to data collected after the sale of recreational marijuana..

Limitations

The data reported in this analysis were collected from secondary data sources. As a result, we are only able to report the raw data. Hence, we were not able to draw inferences from usage to causality. Future research that collects primary data should focus on questions such as:

- How did the legalization of recreational marijuana affect school attendance, suspensions, graduation and dropout rates?
- What was the overall impact of recreational marijuana on student behavior and in-class performance?
- Was there an increase in drug-related arrests as a result of recreational marijuana legalization, both for youth and adults?
- What are the specific health implications of legalizing recreational marijuana? That is, did health indicators change as a result of increased marijuana usage?

- How has recreational marijuana impacted minority communities? That is, has legalization of marijuana had a disparate impact on minority communities?
- Does the state have a sufficient number of protocols and institutions in place to manage substance abuse?

Data and Methodology

As mentioned above, the data for this report were collected from several New Jersey state websites and federal agencies. A fair amount of the state data was available at the county level and disaggregated by race, gender and age. Similarly, we were able to collect data from various federal departments' annual surveys assessing marijuana usage.

These data were used to create bivariate tables, maps and figures that describe marijuana usage, arrests, educational outcomes, and a variety of health outcomes.

Brief History of Marijuana Laws in the U.S.

In 2012, Colorado approved *Amendment 64*, becoming the first state to legalize the recreational use of marijuana despite federal law prohibiting the use of illegal drugs. Since the passage of the Marijuana Tax Act of 1937 by the federal government, possessing, using, selling and growing marijuana is illegal, except for restricted uses. Under the Federal Controlled Substance Act (CSA 21 U.S.C. § 811) of 1970, marijuana is classified as a Schedule I drug and is considered to have no accepted medical value and a high potential for abuse. Therefore, state laws legalizing medical and recreational marijuana directly conflict with federal law. As of 2021, the adult use of cannabis is legal in 18 states and the District of Columbia, and the medical use of cannabis is legal in 37 states.[2]

In the 1980s, nationwide movements by conservative groups lobbied for stricter regulations of marijuana and were instrumental in influencing public attitudes that led to the War on Drugs. In 1996, California became the first state to legalize marijuana for medical use, followed by Washington in 1998. Responding to the increasing acceptance of medical marijuana, the United States Department of Justice issued a memorandum to United States Attorneys discussing the distribution of resources in states with legal marijuana markets (Ogden 2009). While the memo emphasized a need to investigate and prosecute drug traffickers, it noted that federal resources should not be focused on individuals complying with existing state laws pertaining to medical marijuana (Ogden 2009). This has been broadly interpreted as a federal effort to defer to states in the absence of a federal consensus (Stout and Moore 2009). Once again responding to changing views on marijuana, the Department of Justice issued the Cole Memo (2013). The

2 https://irp.cdn-website.com/6531d7ca/files/uploaded/Summary%20Schumer%20Booker%20Wyden.pdf.

memo provided guidance on specific law enforcement priorities, including the diversion of products from the legal market to illegal markets and public health concerns regarding marijuana consumption. The memo also established that states were expected to implement robust and effective enforcement and regulatory mechanisms. To comply, states implemented a traceability system commonly known as "seed to sale" tracking, in which cultivation, testing, distribution and retail sale of marijuana is monitored and recorded. The Department of Justice issued a memo in 2018 abrogating the Cole Memo – all U.S. attorneys were directed to enforce federal law (2018). However, by mid-2021, the U.S. House of Representatives advanced the Cannabis Administration and Opportunity Act to legalize marijuana. According to the senators that introduced the bill, the legislation sought to preserve the integrity of state cannabis laws and provide a path for responsible federal regulation of the cannabis industry.

Despite current federal law and the potential negative consequences for violating it, data indicate that marijuana use has become increasingly pervasive. A recent Pew Research study published in 2021 indicated that Americans overwhelmingly believe marijuana should be legal for recreational or medical use (60% for legalization of recreational or medical use)[3]. Additionally, a 2016 national survey conducted from the Department of Health and Human Services estimated that 24 million Americans aged 12 or older were current marijuana users, which was higher than previous estimates from 2002 to 2015 (SAMSHA 2016).

Table 1.1 below provides a summary of the states that have legalized medicinal and recreational marijuana along with the accompanying legislation.

Table 1.1: Marijuana Laws by State

	Medicinal Focus			Recreational Focus	
State	**Year**	**Statutory Language**		**Year**	**Statutory Language**
Alabama	2021	SB46			N/A
Alaska	1998	BM 8, SB 94 (1999)		2014 (2015)	BM 2
Arizona	2010	Proposition 203		2020	Proposition 207
California	1996	Research/ Proposition 215		2016	Proposition 64
Colorado	2000			2012	Amendment 64
Connecticut	2012	HB 5389		2021	Nonmedical use legislation SB 1201
Delaware	2011	SB 17			N/A
Florida	2016	Amendment 2			N/A
Guam	2014	Proposal 14A		2019	Bill No. 32-35
Illinois	2013	HB 1		2019	SB 0007
Maine	1999	Ballot Question 2		2016 (2017)	Question 1 LD 1650 (vetoed)

3 https://www.pewresearch.org/fact-tank/2021/04/16/americans-overwhelmingly-say-marijuana-should-be-legal-for-recreational-or-medical-use/

Massachusetts	2012	Ballot Question 3		2016	Question 4
Michigan	2008	Proposal 1		2018	Proposal 18-1
Minnesota		SF 2471, Chapter 311			N/A
Mississippi	2020	Initiative 65 (2020)*			
Missouri	2018	Amendment 2			
Montana	2004 2011 2016	Initiative 148 SB 423 Initiative 182		2020	Initiative 190
Nevada	2000	Ballot Question 9		(2017)	Question 2
New Hampshire	2013 2021	HB 573 HB 89			
New Jersey	2009	SB 119		2020 2021	Public question 1 NJ AB 21
New York	2014	A6357		2021	AB 1248/ SB 854
North Dakota	2016	Measure 5 NDCC 19-24.1 NDAC 33-44			
Ohio	2016	HB 523			
Oklahoma	2018	SQ 788			
Oregon	1998	Ballot Measure 67		2014 (2015)	Measure 91
Pennsylvania	2016	SB3			
Utah	2018	HB 3001			
Vermont	2004 2007 2011 2018	SB 76 SB 7 SB 17 H.511		2018 2020	H.511S.54
Virginia	2020 2020 2020 2020	H 1460 S 646 H1617 S976		2021	HB2312 SB1406
Washington	1998	Initiative 691		2012	Initiative 502
District of Columbia	1998	Amendment Act B18-622		2014	Initiative 71

Source: National Conference of State Legislatures. https://www.ncsl.org/research/health/state-medical-marijuana-laws.aspx

Notes: *Supreme Court overturned the law.

Demographics of New Jersey

Given the nature of this legislation and its potential impact on vulnerable populations, it is important to examine the state from a demographic perspective. New Jersey has a population of almost nine million residents spread out over twenty-one counties and is the most densely populated state in the United States with over 1,200 residents per square mile (https://www.census.gov/data/tables/time-series/dec/density-data-text.html). As shown in Table 1.2, the state has a very diverse population and is tied with New York as the 5th

most diverse state in the country based on data from the U.S. Census (https://www.census.gov/library/ visualizations/2021/dec/racial-and-ethnic-diversity-index.html). According to the U.S. Census Department, in 2019, 54.6% of the state's residents were white, 19% were Hispanic, 15.15% were black, and 10% were Asian.

With respect to age, 21.8% of New Jersey's population was under 18 years of age in 2019, and 16.6% of the state's residents were over the age of 65. The average median household income of the state, from 2015-2019, was $82,545, and 9.2% of the state residents lived below the U.S. poverty rate.

The high school graduation rate in the state was 89.8% in 2019, the highest in the country according to the National Center for Educational Statistics, and 39.75% of the state's population had a bachelor's degree or higher. The state was ranked 5th in country according to U.S. News and World Report in educational attainment (https://www.usnews.com/news/best-states/slideshows/the-10-most-educated-states-in-the-us).

Table 1.2: New Jersey Demographics, 2019

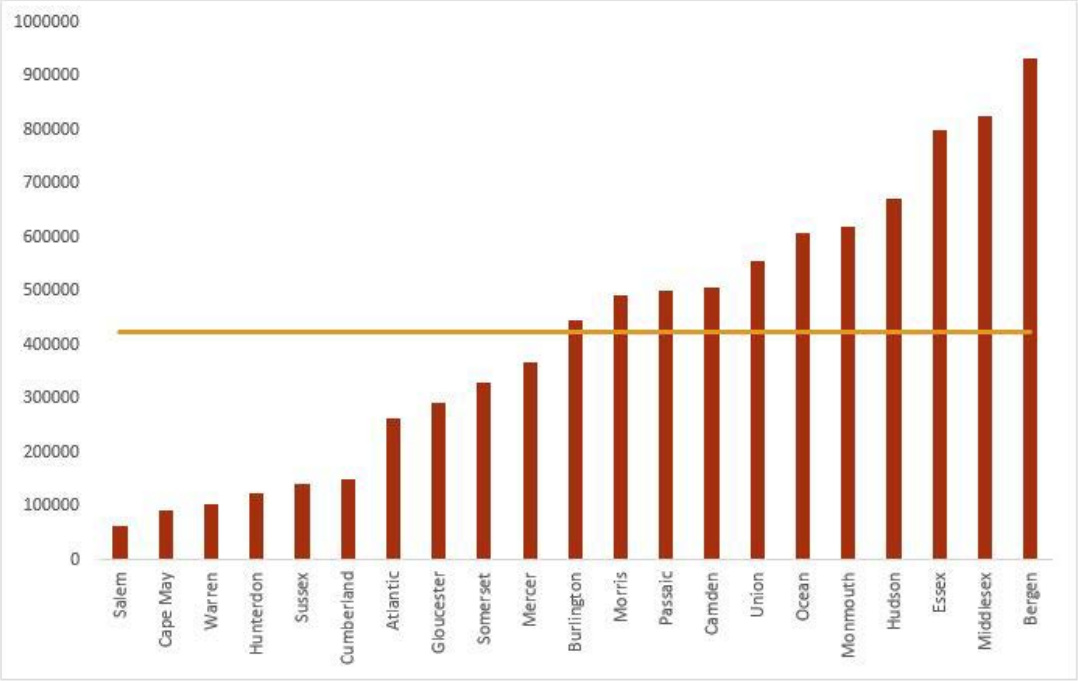
A. *Total Population*	8,882,190
Asian	10.0%
Black	15.1%
Other	1.3%
Hispanic	19.0%
White	54.6%
B. *Age and Gender*	
Persons under 18	21.8%
Persons 65 years and over	16.6%
Female Persons	51.1%
C. *Income & Poverty*	
Median Household Income (2015-19)	$82,545
Per Capita Income in past 12 months (2015-19)	$42,745
Persons in Poverty	9.2%
D. *Education*	
High School Graduate or higher, % persons age 25+	89.8%
Bachelor's Degree or higher, % persons age 25+	39.7%

Source: United States Census Bureau, https://www.census.gov/quickfacts/NJ.

The data in Figure 1.1 provides a graphical depiction of New Jersey's population by county. As

shown, Salem County has the smallest population in the state followed by Cape May, Warren and Hunterdon. The three largest counties in the state are Bergen, Middlesex, and Essex. Roughly half of the counties are below the state average population of 42,000. According to the U.S. Census Bureau, New Jersey has a total population of 9,267,130 (https://www.census.gov/quickfacts/NJ).

Figure 1.1: New Jersey Population by County, 2021



Source: New Jersey Counties by Population. https://www.newjersey-demographics.com/counties_by_population

The data in Table 1.3 present the racial breakdown of the state. The data are important to note given the current data on marijuana usage by race. Essex County has the highest share of black residents (38.6%) followed by Union County (20.9%). Passaic (42.9%) and Hudson (42.7%) Counties have the largest Hispanic populations. Sussex and Cape May Counties have the largest non-Hispanic populations at 85.1% and 85% respectively.

Table 1.3: Race by New Jersey Counties

	% Black	% Asian	% Hispanic	% Native Hawaiian/Other Pacific Islander	% Non-Hispanic White
New Jersey	12.9	10.0	20.9	0.1	54.6
Atlantic	14.6	8.1	19.4	0.1	56.0
Bergen	5.5	17.0	21.0	0.1	55.1
Burlington	16.9	5.4	8.5	0.1	66.6
Camden	18.7	6.0	17.6	0.1	55.8
Cape May	4.1	1.0	8.1	0.1	85.0
Cumberland	18.7	1.4	31.8	0.2	45.4
Essex	38.6	5.9	23.8	0.1	30.2
Gloucester	10.4	3.1	6.7	0.1	77.8
Hudson	10.7	16.4	42.7	0.2	29.0
Hunterdon	2.4	4.4	7.0	0.2	84.8
Mercer	19.5	11.9	18.5	0.2	48.2
Middlesex	9.8	24.9	22.1	0.1	41.7
Monmouth	6.7	5.6	11.1	0.1	75.1
Morris	3.3	10.8	13.9	0.0	70.5
Ocean	3.1	1.9	9.5	0.0	84.3
Passaic	10.0	5.7	42.9	0.2	40.3
Salem	13.5	1.1	9.8	0.0	73.4
Somerset	9.5	18.8	15.2	0.1	54.8
Sussex	2.2	2.0	9.2	0.0	85.1
Union	20.9	5.7	32.8	0.1	39.2
Warren	5.1	2.9	10.2	0.1	80.4

Source: County Health Rankings and Roadmap, https://www.countyhealthrankings.org/app/new-jersey/2016/downloads.

Table 1.4 displays the rural/urban mix in the state. Overall, New Jersey is considered an urban state. However, several counties such as Hunterdon, Salem, Sussex and Warren have a substantial rural population. At the other end of the spectrum, Essex, Hudson, and Union Counties are 100% urban. Most counties in New Jersey exceed 90% urban populations.

Table 1.4: New Jersey Geography by County

	% Rural	% Urban		% Rural	% Urban
New Jersey	5.3	94.7	Mercer	3.5	96.5
Atlantic	12.7	87.3	Middlesex	0.7	99.3
Bergen	0.1	99.9	Monmouth	3.7	96.3
Burlington	6.7	93.3	Morris	6.8	93.2
Camden	1.6	98.4	Ocean	2.9	97.1
Cape May	17.5	82.5	Passaic	2.4	97.6
Cumberland	23.0	77.0	Salem	45.3	54.7
Essex	0.0	100.0	Somerset	5.8	94.2
Gloucester	8.3	91.7	Sussex	39.8	60.2
Hudson	0.0	100.0	Union	0.0	100.0
Hunterdon	49.6	50.4	Warren	37.6	62.4

Source: County Health Rankings and Roadmap, https://www.countyhealthrankings.org/app/new-jersey/2016/downloads.

The data in Table 1.5 depict the age distribution by county. As shown, the distribution was fairly homogenous. Ocean County (24.2%) had the largest population in the state under the age of 18, followed by Passaic, Cumberland, and Essex (all at 23.7%). Cape May had the smallest share of its population under the age of 18 (17.3%) and the largest proportion of its population 65 years of age or older (27.3%).

Table 1.5: Age Distribution by New Jersey Counties

County	% Less Than 18 Years of Age	% 65 & Over	County	% Less Than 18 Years of Age	% 65 & Over
New Jersey	21.8	16.6	Mercer	21.2	15.6
Atlantic	21.1	18.6	Middlesex	21.7	15.5
Bergen	21.1	17.7	Monmouth	20.9	18.2
Burlington	20.7	17.4	Morris	20.8	17.6
Camden	22.6	16.1	Ocean	24.2	22.8
Cape May	17.3	27.3	Passaic	23.7	15.0
Cumberland	23.7	15.6	Salem	21.4	19.0
Essex	23.7	13.9	Somerset	21.5	16.2
Gloucester	21.6	16.3	Sussex	19.4	18.0
Hudson	20.3	12.2	Union	23.3	14.7
Hunterdon	19.1	19.4	Warren	19.3	18.7

Source: County Health Rankings and Roadmap, https://www.countyhealthrankings.org/app/new-jersey/2016/downloads.

Organization of the Report

This remainder of this report is split into five chapters. Chapter 2 examines general marijuana usage in the state based on secondary data collection. More specifically, the report considers marijuana use by gender, adult use by age, and youth use by age.

Chapter 3 focuses on law enforcement. This chapter examines cannabis-related arrests overall, and cannabis-related arrests by race, gender, and age. Since Newark is the largest city in the state, there is a special section that examines cannabis-related arrests in Newark from 2010-2019. The next section examines traffic fatalities associated with cannabis usage and cannabis eradication and suppression in New Jersey.

The next chapter (4) considers public health and behavioral service factors in New Jersey that are likely to be impacted by marijuana usage as well as various health conditions. This includes health conditions by county in general, marijuana abuse and dependence by gender, marijuana admissions into medical facilities, drug overdose mortality, suicides, mental health providers, and substance abuse treatment facilities.

Chapter 5 focuses on youth and various educational outcomes that are likely to be affected by marijuana usage in New Jersey. The chapter begins by examining high school graduation and dropout data over time. This is followed with a section on postsecondary enrollment patterns overall and by race/ethnicity. The next section examines disciplinary actions and behavioral incidents in public schools. The following section examines students' perceptions of marijuana usage by their peers and the final section examines juvenile arrest data in general and marijuana usage by gender and race.

The final chapter (6) provides a summary of the key quantitative and qualitative factors and questions that should be collected in future studies. In addition, the chapter provides a health framework along with policies that should be pursued by New Jersey policymakers.

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Chapter 2

Marijuana Usage in New Jersey

Charles E. Menifield and Liliana Ordonez

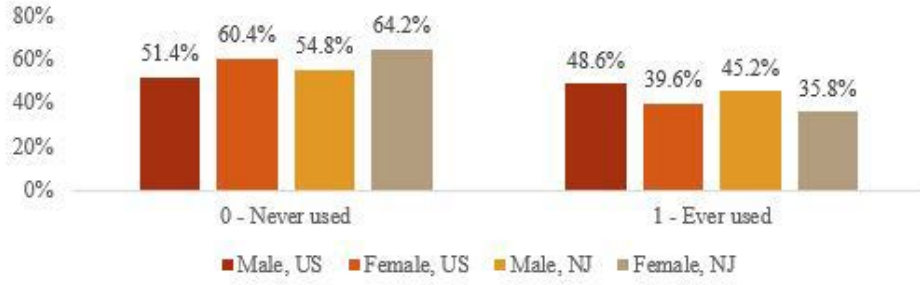
Introduction

The goal of this chapter is to characterize and understand the impact of recreational cannabis legalization on youth and adult usage behavior in New Jersey. We use data from the National Survey on Drug Use and Health (NSDUH), which provide up-to-date information on drug use and related issues in the United States. This survey interviews roughly 70,000 people aged 12 and older. The chapter analyzed New Jersey's pooled data from 2010-2019. Subsequently, we dissected yearly data to understand the trends in New Jersey's marijuana usage compared to the United States.

Data Analysis

Figure 2.1 shows that from 2010-2019, male residents of New Jersey and the U.S. were more likely than females to use marijuana. The NSDUH estimated that 127.1 million people have used marijuana in the U.S. (NSDUH Data Files 2020). In the case of New Jersey, 3.02 million people reported that they have used marijuana at least once over the same period of analysis (35.8% of women and 45.2% of men). The data for "never used" marijuana are the inverse of the "ever used" data. Females in New Jersey and in the U.S. were more likely than males to report that they "never used" marijuana. Men and women in New Jersey were less likely to have ever used marijuana when compared to men and women in the U.S.

Figure 2.1: Marijuana ever used by Gender, NJ and US (2010 –19)



Source: Substance Abuse and Mental Health Data Archive https://rdas.samhsa.gov/#/.

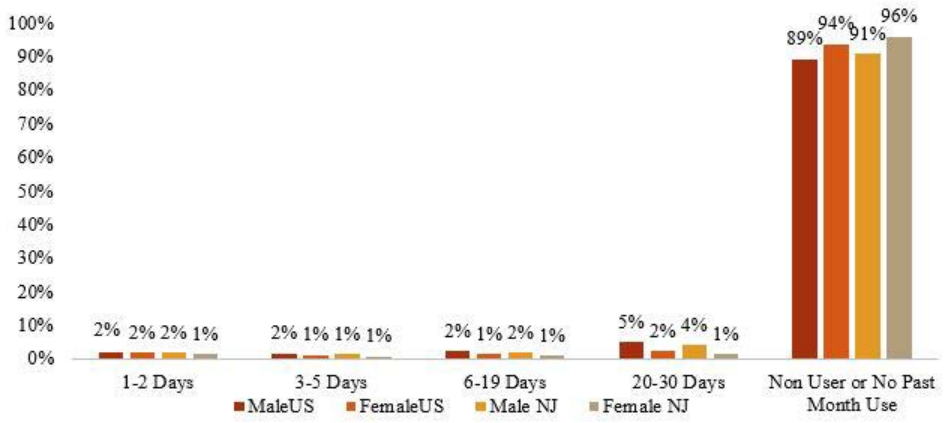
Figure 2.2 presents the frequency of marijuana usage in New Jersey in the past month, disaggregated by gender. The frequency of marijuana use among female users was lower than among male users by substantial margins in essentially every category. Usage during 1 to 2-days in the past month was close with 10.8% of female users and 13.9% of male users indicating that they used the drug 1-2 days during the last month. The contrast between men and women increased as the number of days during which marijuana was used increased. Men outnumbered women by a three-to-one margin in use of marijuana during twenty to thirty days in the past month (29.5% of male users versus 9.6% of female users).

Figure 2.2: Number of days Marijuana used in the Past Month by Gender, NJ (2010-19)

Source: Substance Abuse and Mental Health Data Archive, https://rdas.samhsa.gov/#/.

Figure 2.3 displays marijuana usage by number of days. As shown in the figure, the vast majority of the population included in the analysis indicated that they were a non-user in the past month. Of the remaining four time periods, the 20-30 usage period had the most users. Similar to the previous figures, men outnumbered women in terms of usage 4 to 1 in New Jersey and 5 to 2 in the U.S.

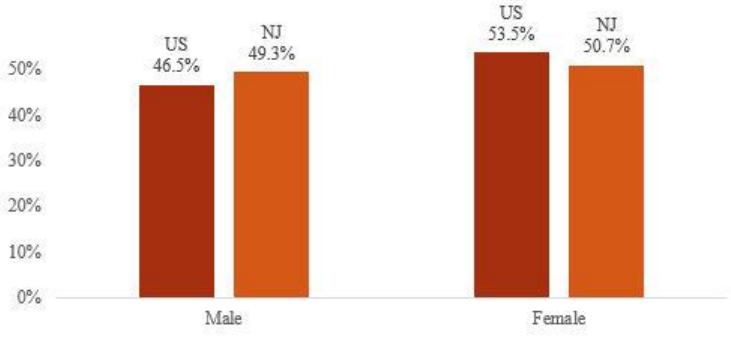
Figure 2.3: Number of Days Marijuana Used in the Past Month) by Gender, NJ and US (2010–19)



Source: Substance Abuse and Mental Health Data Archive https://rdas.samhsa.gov/#/.

Although the above bar graphs show a clear predominance of male versus female marijuana use both in New Jersey and in the United States, Figure 2.4 indicates that virtually equal shares of those who initiated use in the past year in New Jersey were male (49.3%) or female (50.7%). Across the U.S., those who initiated use in the past year were somewhat more likely to be female (53.5%) than male (46.5%).

Figure 2.4: Initiated Marijuana Use in the Past Year by Gender, NJ and US (2010-19)

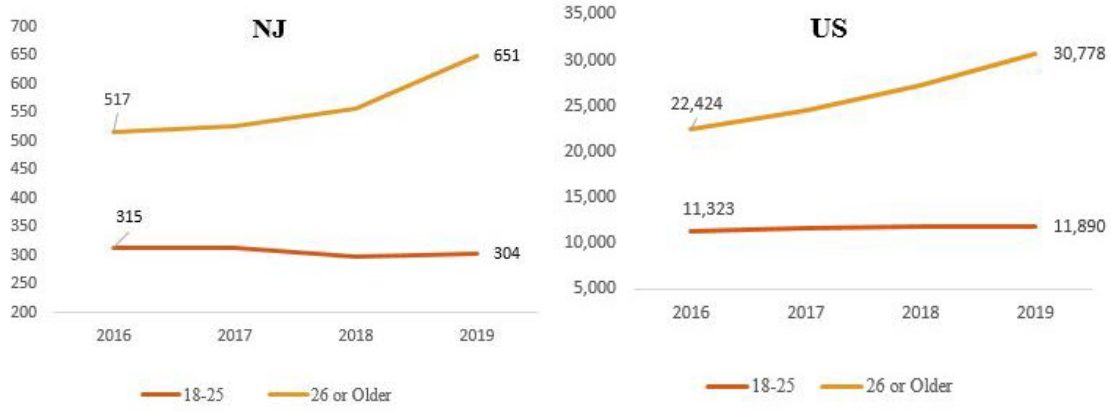


Source: Substance Abuse and Mental Health Data Archive https://rdas.samhsa.gov/#/.

Adult Marijuana Usage

In this section, we analyzed marijuana use in the adult population (over 18 years of age) in the past year and in the past month. As shown in the following graphs (Figures 2.5 and 2.6), the adult group was divided into two groups: young adults (aged 18 to 25 years), and older adults (aged 26 years or older). Marijuana use among young adults in New Jersey and in the United States has generally been stable and flat over the 2016-2019 period for past year and past month usage. As we can see in Figure 2.5, the line for those 18 to 25 years old is generally flat for New Jersey and the country. In 2016, 315,000 young adults reported marijuana use during the prior year, while in 2019, this amount decreased to 304,000 users. In other words, marijuana usage for those aged 18-25 decreased by 3.5% in New Jersey. The slope of the line for young adult usage in the past month followed a similar trend as past year usage in New Jersey and in the U.S.

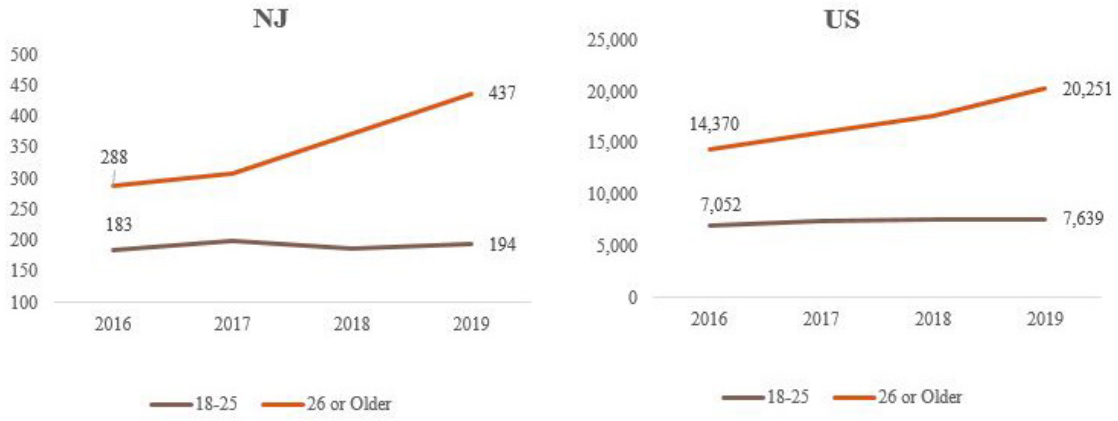
Figure 2.5: Adult Marijuana Use *in the Past Year*, NJ and US (thousands of people)



Source: NSDUH Estimated Totals by State: https://www.samhsa.gov/data/taxonomy/term/435.

However, for those over 25 years of age (older adults), the tendency is quite different. In 2016, approximately 517,000 older adults in New Jersey reported marijuana use in the past year, while in 2019, the number increased to 651,000 (25.9% more than 2016) users. This was true when analyzing the data for prior year's usage (Figure 2.5) and the data for the prior month's usage, which increased 51.7% among older adults in New Jersey (Figure 2.6). This trend corresponded with the U.S. data as a whole.

Figure 2.6: Adult Marijuana Use *in the Past Month*, NJ and US (thousands of people)

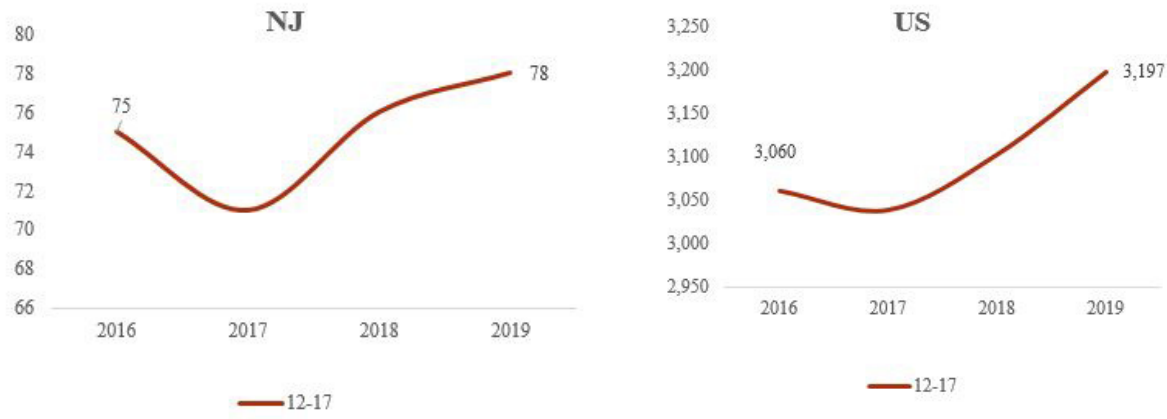


Source: NSDUH Estimated Totals by State: https://www.samhsa.gov/data/taxonomy/term/435.

Youth Marijuana Usage

Past year marijuana usage among youth in New Jersey and the U.S. has witnessed a slight increase in the last three years, after declining in 2017 (see Figure 2.7). In 2016, approximately 75,000 youth, aged 12-17, in New Jersey reported having used marijuana. Three years later, in 2019, the number increased slightly to 78,000 youth users. Hence, there was a 4% increase in marijuana usage between 2016 and 2019. In the case of the U.S., youth marijuana usage rose 4.5% between 2016 and 2019.

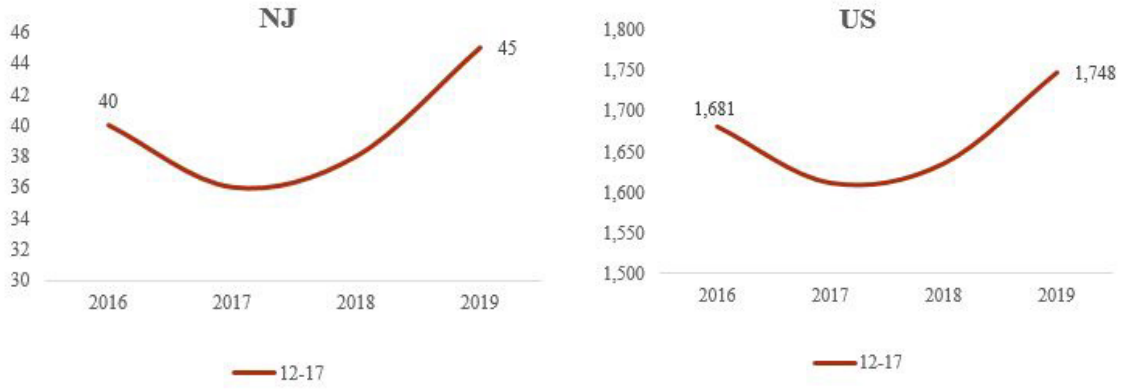
Figure 2.7: Youth Marijuana Use in the Past Year, NJ and US (thousands of people)



Source: NSDUH Estimated Totals by State: https://www.samhsa.gov/data/taxonomy/term/43.

We observed the same trend when analyzing youth marijuana consumption during the last month (Figure 2.8). In 2016, approximately 40,000 youth in New Jersey reported using marijuana in the previous month. There was a decline in usage in 2017, with an increase in 2018 and in 2019 when the number of users reached 45,000 (a 12.5% increase). The trend in the U.S. followed the same pattern, but with a smaller rate of increase (4.0%). There were 1,618,000 youth marijuana users across the country in 2016. The numbers declined slightly to 1,611,000 in 2017, rose slightly in 2018, and more dramatically increased in 2019 to 1,748,000 youth users.

Figure 2.8: Youth Marijuana use in the Past Month, NJ and the US (thousands of people)



Source: NSDUH Estimated Totals by State: https://www.samhsa.gov/data/taxonomy/term/43.

Summary

The secondary data collected for marijuana usage in New Jersey provided a lot of insight into usage rates among various populations. According to the data retrieved from the Substance Abuse and Mental Health Data Archive, men were notably more likely than women to indicate that they had ever used marijuana in New Jersey (45.2% of men in NJ vs. 35.8% of women in NJ) and across the country (48.6% of men in the US vs. 39.6% of women in the US).

Examining the inverse of these findings, almost two-thirds of women (64.2%) and more than half of men (54.8%) in New Jersey indicated that they have never used marijuana. Across the U.S., six in ten women (60.4%) and half of men (51.4%) reported that they had never used marijuana. Overall, women were more likely than men in the U.S. and in New Jersey to indicate that they had never used marijuana.

On the other hand, 6.6% of the population in New Jersey reported having smoked marijuana in the past month. When the data were disaggregated, we found that 4.5% were male and 2.1% were

female. When frequency of marijuana use was considered for the period 2010-2019, among users, the monthly use category (39%) had the greatest number of users followed by daily users (24.7%).

Marijuana use by youth (12-17) increased during the 2016-2019 period for the past year and past month categories. While not conclusive, the data suggest that New Jersey is likely to see an increase in the number of youth users now that recreational marijuana has been legalized. Hence, it is likely that increased use will have a reciprocal impact on other variables such as youth health and educational outcomes.

References

National Survey on Drug Use and Health NSDUH Estimated Totals by State: https://www.samhsa.gov/data/taxonomy/term/43.

National Survey on Drug Use and Health NSDUH Estimated Totals by State: https://www.samhsa.gov/data/taxonomy/term/435.

NSDUH Data Files. 2020. National Survey of Drug Use and Health (NSDUH) Releases. https://www.samhsa.gov/data/sites/default/files/reports/rpt35323/NSDUHDetailedTabs2020/NSDUHDetailedTabs2020/NSDUHDetTabsSect1pe2020.htm.

Substance Abuse and Mental Health Data Archive https://rdas.samhsa.gov/#/.

Chapter 3

Cannabis and Law Enforcement

Valerio Baćak and Julia Bowling

Introduction

This chapter describes indicators of cannabis-related contact with law enforcement among adult persons in New Jersey. The chapter examines arrests for possession and arrests for sale/production overall and by race, gender and age. We also examine New Jersey traffic fatality data associated with cannabis and alcohol use, and outcomes of the cannabis eradication/suppression programs in New Jersey. At the end of section, we summarize the findings, discuss data limitations and highlight data needs.

Cannabis-Related Arrests

We first present the total numbers of arrests, arrest rates adjusted for population size, and disparities in arrests of adults by gender, race, and age for both cannabis possession and sale/production.[4] The figures are based on Uniform Crime Reporting data reported by more than 500 local law enforcement agencies in New Jersey to the Federal Bureau of Investigation (FBI) on a voluntary basis.

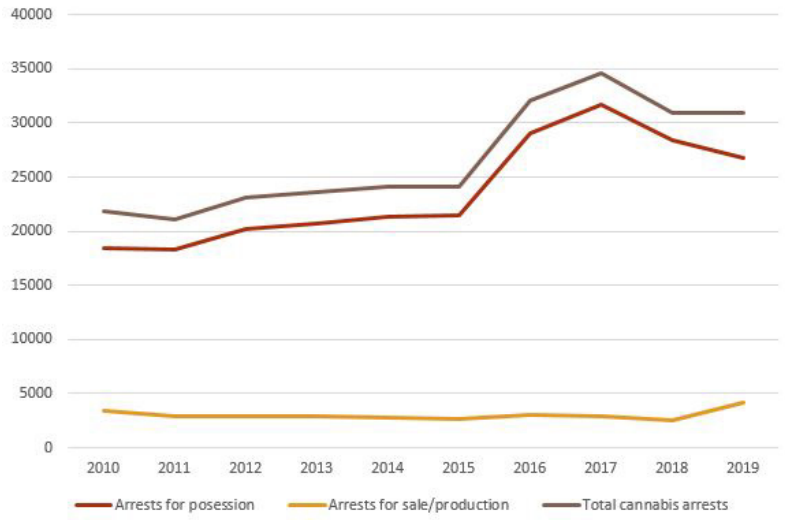
Count and Arrest Rates

Table 3.1A in the Appendix provides the annual number of cannabis-related arrests reported by law enforcement agencies in New Jersey between 2010 and 2019. The table also includes data points that describe how arrests are distributed by demographic characteristics—race, gender, and age—and arrest type. In this section, we highlight key aspects of cannabis-related arrests in a series of figures.

As displayed in Figure 3.1, the total number of cannabis-related arrests among adults in New Jersey changed by a relatively small amount between 2010 and 2015. During that period, arrests among adults increased from 21,884 in 2010 to 24,118 in 2015. In 2016, arrests jumped to 32,066 and to 34,536 in 2017, while decreasing to about 31,000 since. Overall, the total number of arrests between 2010 and 2019 increased by about 40%.

4 In the interest of space, in some figures we only write "sale", but this term refers to arrests for both sale and production.

Figure 3.1: Cannabis-Related Arrests in New Jersey (2010-19)

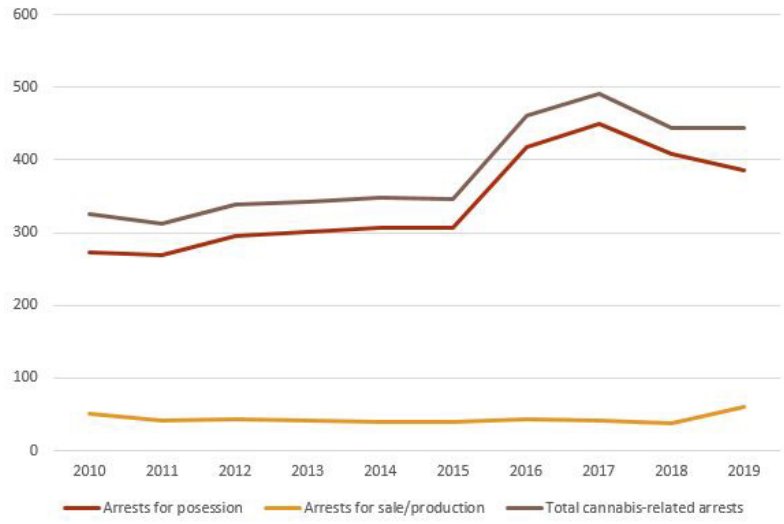


Source: Uniform Crime Reports, Federal Bureau of Investigation. https://crime-data-explorer.fr.cloud.gov/pages/explorer/crime/arrest.

Arrests for possession followed a similar pattern to overall arrests, with a large increase in 2016, while the largest number of arrests for possession was recorded in 2017 (31,663). Over the entire period between 2010 and 2019, arrests for possession increased by about 45%. During that same period, arrests for sales/production increased by about 20%, from 3,461 to 4,154. The largest change during this period occurred between 2018 and 2019, increasing from 2,593 to 4,154. The number of arrests for sale/production changed slightly before 2018, in contrast to the greater change in the count of arrests for possession (see Figure 3.1).

When adjusted for population size, arrest rates per 100,000 population (presented in Table 3.2A in the Appendix), experienced a similar trend over time. The arrest rate was at its lowest level early in the data series and gradually increased, peaking in 2017 at almost 500 per 100,000 population—as depicted in Figure 3.2.

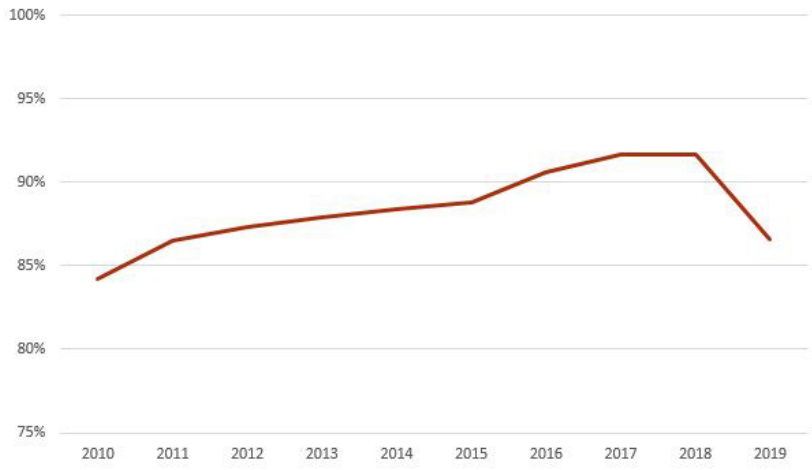
Figure 3.2: Cannabis-Related Arrests in New Jersey, per 100,000 Population (2010-19)



Source: Uniform Crime Reports, Federal Bureau of Investigation. https://crime-data-explorer.fr.cloud.gov/pages/explorer/crime/arrest.

Each year more than 80% of all cannabis-related arrests were for possession (see Figure 3.3). These statistics are in harmony with national level data where the vast majority of cannabis-related arrests were also for possession—and thus drug use rather than sale (Adinoff and Reiman 2019; Plunk et al. 2019).

Figure 3.3: Arrests for Possession as a Percentage of all Cannabis-Related Arrests in New Jersey (2010-19)



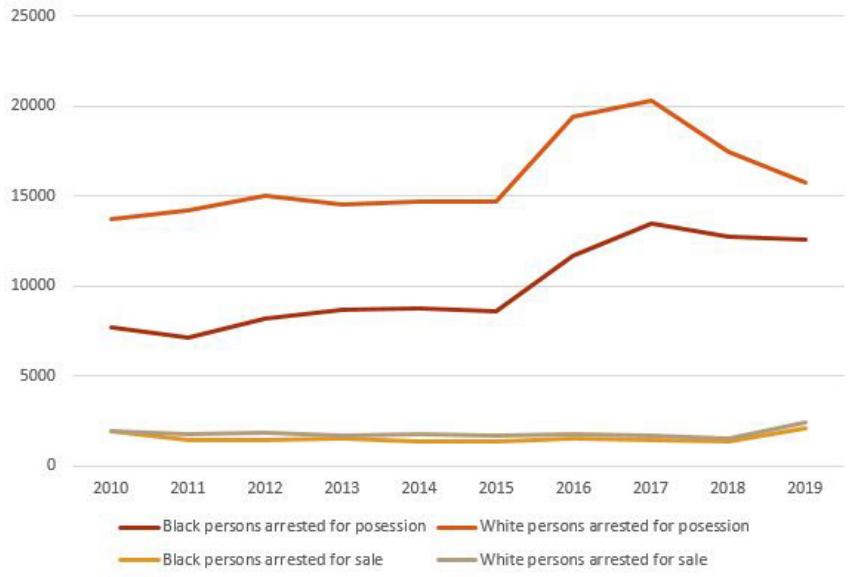
Source: Uniform Crime Reports, Federal Bureau of Investigation. https://crime-data-explorer.fr.cloud.gov/pages/explorer/crime/arrest.

Note: The line in the figure describes the percentage of all cannabis-related arrests that were made for cannabis possession.

Race

Figure 3.4 indicates that for black and white persons, the vast majority of arrests were for possession; arrests for sale/production remained stable over time.

Figure 3.4: Cannabis-Related Arrests in New Jersey, by Race (2010-19)

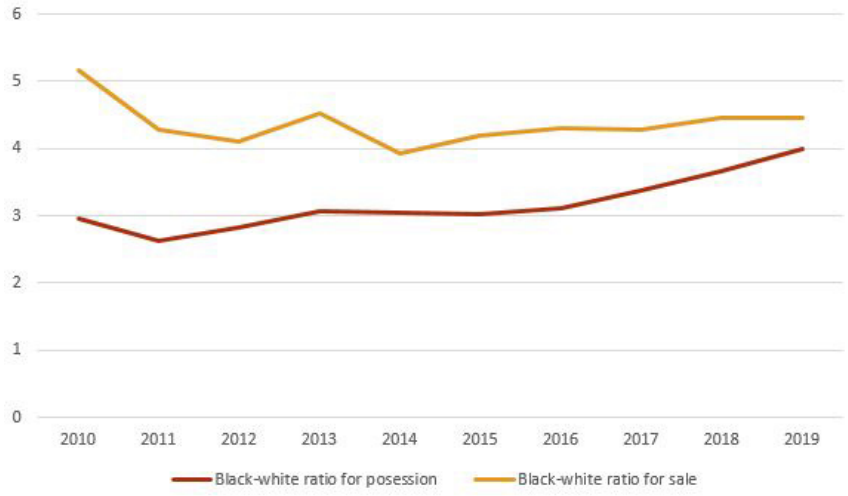


Source: Uniform Crime Reports, Federal Bureau of Investigation. https://crime-data-explorer.fr.cloud.gov/pages/explorer/crime/arrest.

Note: The figure is based on arrests for all ages, not only adults.

Figure 3.5 shows disparities in arrest of black and white persons per 100,000 population. Every year, black persons were arrested for both cannabis possession and sale/production at a considerably higher rate. The disparity for possession arrests was highest in 2010—with the rate for black persons being more than five times the rate for white persons. In contrast, the disparity for sale/production arrests was the highest in 2019. The black-white ratios for the two types of arrests converged over time.

Figure 3.5: Black-White Ratio in Cannabis-Related Arrests in New Jersey (2010-19)



Source: Uniform Crime Reports, Federal Bureau of Investigation. https://crime-data-explorer.fr.cloud.gov/pages/explorer/crime/arrest.

Note: The points on the line in the figure are derived by dividing the number of arrests of black persons per 100,000 population with the number of arrests of white persons per 100,000 population in each year. The figure is based on arrests for all ages, not only adults.

Gender

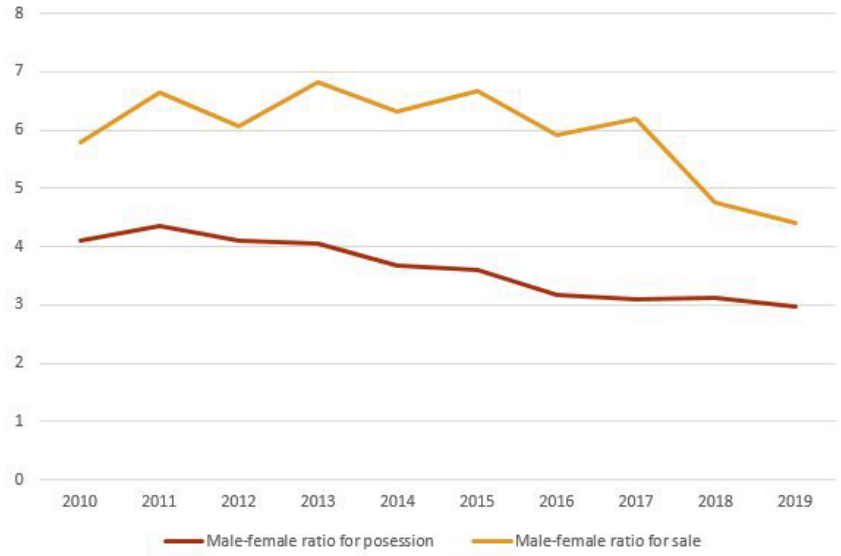
Between 2010 and 2019, men were arrested at a much higher rate than women for both cannabis possession and sale/production (see Figure 3.6). The data for sale/production arrests were relatively flat and stable for men and women during this period.

Figure 3.6: Cannabis-Related Arrests in New Jersey, by Gender (2010-19)

Source: Uniform Crime Reports, Federal Bureau of Investigation. https://crime-data-explorer.fr.cloud.gov/pages/explorer/crime/arrest.

As shown in Figure 3.7, for every female arrested for possession, there were about four male arrests up until 2015, when the disparity began to slowly decrease. In 2019, men were arrested for possession at a rate about three times higher than women. Notably, however, women appear to use marijuana less frequently than men. The gender disparity in arrests for sale/production was considerably higher than the disparity for possession.

Figure 3.7: Male-Female Ratio in Cannabis-Related Arrests in New Jersey (2010-19)



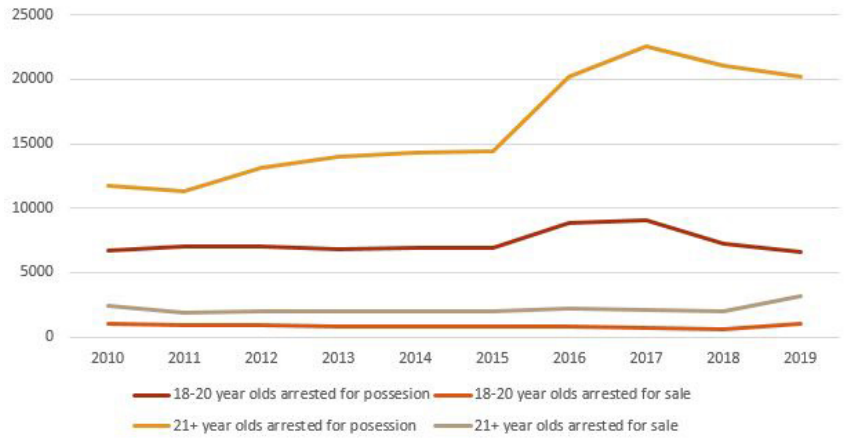
Source: Uniform Crime Reports, Federal Bureau of Investigation. https://crime-data-explorer.fr.cloud.gov/pages/explorer/crime/arrest.

Note: The points on the line in the figure are based on dividing the number of arrests of men with the number of arrests of women in each year.

Age

Figure 3.8 documents the number or count of arrests for cannabis possession and sale/production, separately for adults 18-20 years of age and those who were 21 and older in New Jersey. As shown in the graphs, possession of cannabis was the most frequent type of arrest. Arrests among persons 18-20 appeared to vary little until 2016 when they jumped to 8,881 arrests. Among those 21 and older, there was considerably more variation and an upward trend, especially starting in 2016.

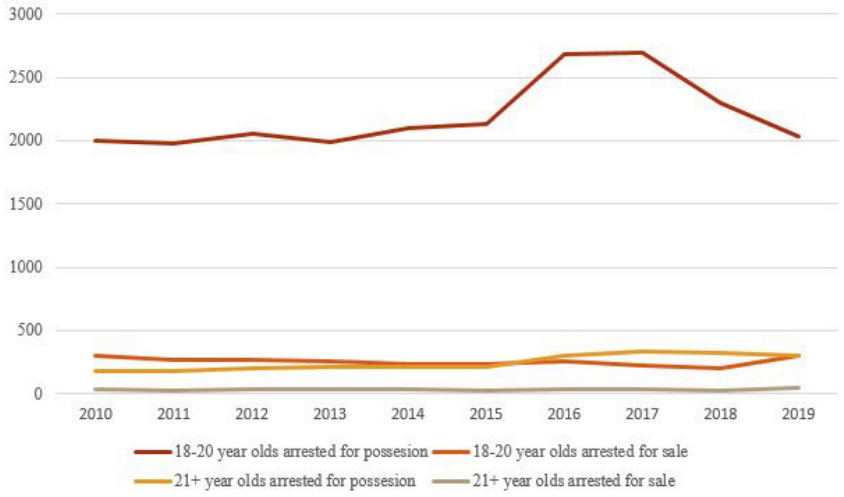
Figure 3.8: Cannabis-Related Arrests in New Jersey, by Age (2010-19)



Source: Uniform Crime Reports, Federal Bureau of Investigation. https://crime-data-explorer.fr.cloud.gov/pages/explorer/crime/arrest.

Once the number of arrests was adjusted for population size, persons between the ages of 18 and 20 years old in New Jersey were arrested for cannabis possession at an exceptionally high rate (see Figure 3.9). For example, in year 2017, when the possession arrest rate was the highest, this segment of the population was arrested for possession at a rate of 2,694 per 100,000 residents in the population. This number was in stark contrast to the arrests rates for sale/production, as well as arrest rates among persons 21 and older.

Figure 3.9: Cannabis-Related Arrest Rates per 100,000 Population (NJ), by Age (2010-19)

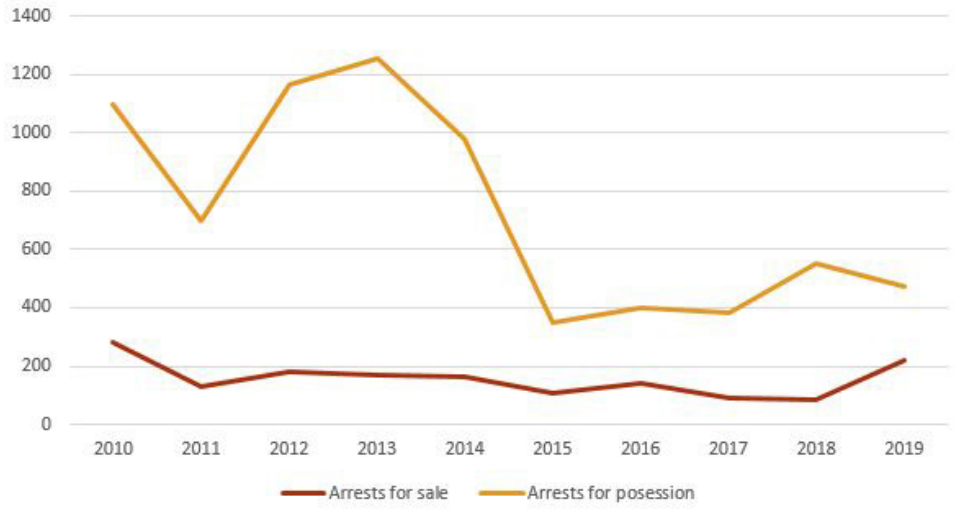


Source: Uniform Crime Reports, Federal Bureau of Investigation. https://crime-data-explorer.fr.cloud.gov/pages/explorer/crime/arrest.

Cannabis-Related Arrests in Newark, NJ

Figure 3.10 displays the number of cannabis-related arrests between 2010-2019 for possession and sale/production by Newark Police Department (NPD)—the largest police agency in New Jersey. Most arrests were for possession, although this disparity decreased considerably between 2013 and 2015, and arrests for possession have since remained a much smaller proportion of all arrests in Newark when compared to arrest numbers at the state level.

Figure 3.10: Cannabis-Related Arrests, Newark Police Department (2010-19)



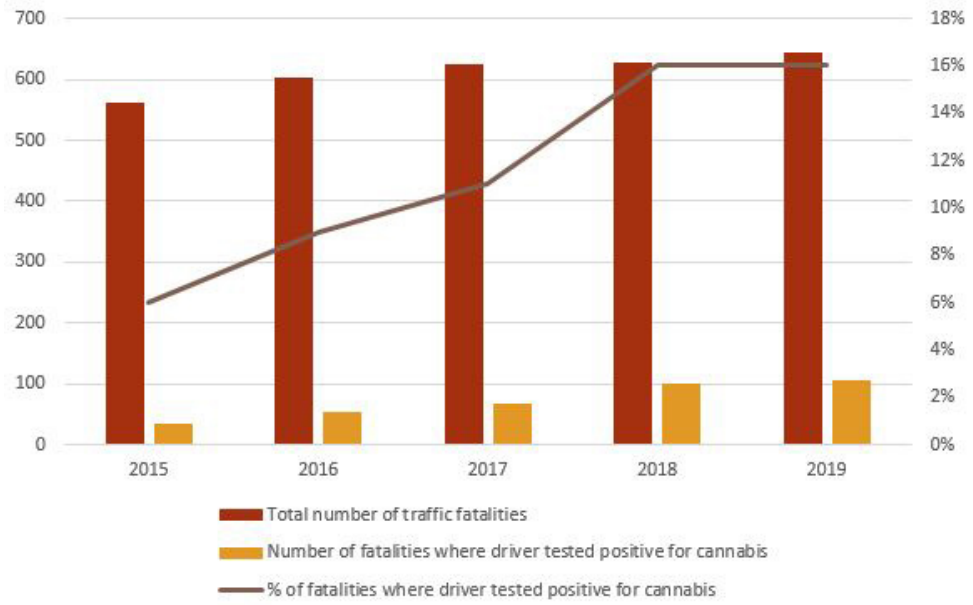
Source: Uniform Crime Reports, Federal Bureau of Investigation. https://crime-data-explorer.fr.cloud.gov/pages/explorer/crime/arrest.

Fatality Analysis Reporting System

We examined data on traffic fatalities reported in the Fatality Analysis Reporting System or FARS. FARS is a national census of fatal traffic crashes administered by the National Highway Traffic Safety Administration. In addition to reporting the number of fatalities that occur, FARS contains data on drug and alcohol testing for drivers involved in crashes. Tables 3.3A, 3.4A, and 3.5A in the Appendix contain all the data presented in the figures.

In Figure 3.11, we report the number and percentage of fatal crashes in which drivers were tested for cannabinoids or blood alcohol concentration (BAC) between years 2015-2019. During this period, both testing and testing positive for cannabis in New Jersey increased—growing annually from 34 or 6% of all fatal crashes in 2015 to 106 or 16% of all fatal crashes in 2019.

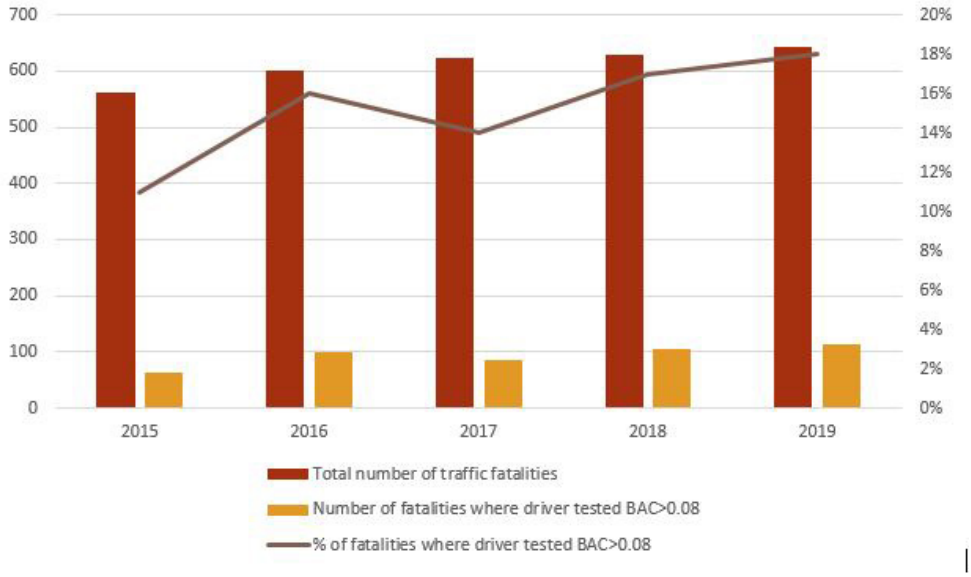
Figure 3.11: New Jersey Traffic Fatalities, Driver Tested Positive for Cannabis (2015-19)



Source: Fatality Analysis Reporting System, National Highway Traffic Safety Administration. https://www.nhtsa.gov/research-data/fatality-analysis-reporting-system-fars.

Figure 3.12 presents the number and percentage of fatal crashes in which a driver had a recorded BAC value at or higher than .08, which is the national standard for drivers to be considered impaired. The number of traffic fatalities has remained around 600 every year, with the exception that it was a little lower in 2015. The percentage of fatalities where drivers tested positive for BAC was relatively low in 2015 when compared to the other four data points. This data point has seen a consistent increase since 2017. In 2019, the last year of available data, 18% of all fatal crashes involved a driver with alcohol levels higher than the legal standard compared to 11% in 2015.

Figure 3.12: New Jersey Traffic Fatalities, Driver Tested Positive for BAC>.08 (2015-19)



Source: Fatality Analysis Reporting System, National Highway Traffic Safety Administration. https://www.nhtsa.gov/research-data/fatality-analysis-reporting-system-fars.

Cannabis Eradication and Suppression

Table 3.1 presents the number of cannabis plants seized by the Drug Enforcement Administration in New Jersey annually between 2011 and 2019. These data are collected as part of the Domestic Cannabis Eradication/ Suppression Program (DCE/SP) that assists state and local law enforcement agencies in cannabis eradication efforts. Table 3.6A in the Appendix contains additional data points.

There appears to be sizeable variation and no discernable trend in the number of cultivated plants seized across years. The highest number of plants was seized in 2011 and 2017— more than 2,000 plants in each of those years. In terms of processed cannabis, there was

Table 3.1: DEA Cannabis Eradication/ Suppression Program in New Jersey (2011-19)

Year	The number of Cultivated Plants	Processed Cannabis (lb)	Number of Arrests	Assets Seized (USD)
2011	2,360	32	64	18,784
2012	1,781	519	38	320,397
2013	727	38	14	10,306
2014	NA	NA	NA	NA
2015	115	3	8	6,000
2016	71	31	8	0
2017	2,106	16	11	1,800
2018	120	40	7	16,000
2019	125	1,003	27	33,060
2020	1,400	48	6	0

Source: Drug Enforcement Administration, Domestic Cannabis Eradication/Suppression Program. https://www.dea.gov/operations/eradication-program.

a large year-to-year variation. By far, the greatest amount of processed cannabis was seized in 2019 (1,003 pounds). Arrests for cannabis cultivation ranged from a low of six persons in 2020 to a high of 64 persons in 2011. Again, there is a lot of fluctuation in this data point. The value of assets seized was below $35,000 every year, except in 2012, when the value exceeded $320,000.

Summary

n this chapter, we described indicators of cannabis-related contact with law enforcement among adult persons in New Jersey. Between 2010-2019, arrests for possession increased, with a large increase in 2016, while arrests for sale/production have remained relatively flat, with a notable increase in 2019. Every year during this period, at least 80% of all cannabis-related arrests have been for possession. For this reason, cannabis legalization has great potential to reduce contact with law enforcement and thus reduce the social stress and harm to mental health inflicted on communities by over policing of minor offenses (Alang et al., 2021).

The main findings in this section are the large disparities in cannabis-related arrests by race, gender, and age. Between 2010 and 2019, arrests of black persons for possession, on average, occurred at a rate more than three times greater than arrests of white persons. The disparity for sale/production was even greater. Between 2010-2019, adult men were arrested, on average, at a rate about 3.5 times greater than women for possession and about six times greater for sale/production. With respect to age, persons between the ages of 18-20 were arrested at rates much higher than adults 21 and older, especially for possession.

To better monitor the effects of legalization, there is a need for considerably more data from state agencies, including law enforcement agencies and the courts. These data should allow researchers to connect persons throughout the different stages of the criminal legal process, starting with the police stop. The data must allow disaggregation by race, gender, and age. In addition, there is a need to collect additional data from the public, especially populations and communities historically targeted by cannabis law enforcement to understand the ways in which legalization has changed the nature of how police and courts interact with members of the public.

Data Limitations

Despite the benefits associated with examining the available data, there are limitations as we highlighted above. In fact, there are known limitations of UCR data on arrests, and FARS data on cannabis and alcohol toxicology. First, the UCR data are voluntarily provided by law enforcement agencies, which means some agencies do not provide any data or do not provide data for each month. Second, UCR records only the most serious offense if there were multiple offenses in a single incident, and the records are for arrests, not persons, which means that a single person may have been arrested multiple times. This limits the extent to which disparities by gender, race, and

age can be examined because the same members of one group may be arrested more frequently compared to another group. Third, an arrest does not equal factual guilt.[5]

n 2021, the UCR program is transitioning to the National Incident-Based Reporting System (NIBRS) that provides much more detailed information about arrests. Unlike New Jersey, some states have already been collecting NIBRS data and are able to present a more comprehensive assessment of cannabis-related arrests. Specifically, NIBRS will provide data on "each single crime incident—as well as on separate offenses within the same incident—including information on victims, known offenders, relationships between victims and offenders, arrestees, and property involved in crimes."[6]

As described by the National Highway Traffic Safety Administration (NHTSA), there are multiple limitations that need to be considered when interpreting FARS data.[7] First, the presence of a positive drug result is not the same as the person being impaired by the drug. This is especially relevant for cannabis toxicology results because traces of cannabis can be detected weeks after consumption. Second, unlike BAC, there is no national standard on what level of cannabis qualifies as being impaired. Third, there is variation within and between states in terms of how many drivers are tested, how frequently, and how testing was done. Combined, this means that FARS data cannot be reliably used to infer that cannabis or alcohol consumption caused a crash, nor can it be used to assess whether "impaired" driving has increased or decreased over time, even within a single state.

Data Needs

To better monitor the effects of legalization on contact with law enforcement, researchers and policymakers in New Jersey must have access to significantly more data than the data currently available. This is especially critical for assessing how legalization has affected racial disparities in police stops and arrests. The data required for a reliable and comprehensive assessment of the effects of legalization need to be disaggregated by race, gender, and age.

Contact with the criminal legal system can have many harmful consequences for persons, even if they are not convicted of any offenses. For example, studies have found adverse health effects of being stopped by police and arrested, having a criminal record, and spending long periods of time in often crowded jails awaiting trial (Turney and Wakefield 2019). At the same time, incarceration affects defendants' ability to continue their education, keep a job, and preserve relationships with family members, among other things. Hence, it is essential that law enforcement agencies collect data on how police enforce cannabis-related laws and which populations police tend to target,

5 More information about the characteristics and limitations of UCR arrest data are available in Chapter 5 of the book "Uniform Crime Reporting (UCR) Program Data: A Practitioner's Guide" by Jacob Kaplan: https://ucrbook.com/.

6 https://www.fbi.gov/news/stories/five-things-to-know-about-nibrs-112520.

7 https://crashstats.nhtsa.dot.gov/Api/Public/ViewPublication/812072.

especially in light of the high black-white disparities in cannabis-related arrests despite similar rates of cannabis use among the two groups (see also SB 677).

Although this is not a comprehensive assessment of data needs, the following items will make a significant impact in reducing the current data void. First, court records in New Jersey are difficult and expensive to obtain, yet court records specifically about charges and convictions related to cannabis are critical for assessing the effects of legalization on marginalized communities—a task that should be at the center of evaluation efforts. Court records and aggregate case filing numbers should therefore be made available in a way that is transparent, comprehensive, and timely.

Second, there is a need for access to considerably more data from government agencies at both the state and local level, including law enforcement, probation, and parole agencies. The data should be made available in a way that allows researchers to connect defendants throughout the different stages of the criminal legal process, starting with arrest. Data from parole and probation agencies, for instance, can help researchers and policymakers assess how frequently cannabis testing is made a condition of release, and how frequently it is considered a technical violation that can lead to re-arrest and re-incarceration. More detailed arrest data from police are needed to help distinguish between the number of arrest incidents and the number of people arrested, especially in different racial/ethnic groups, and ensure reliable data are collected on Hispanic populations—these data have been poorly recorded in the UCR program.

Third, there is a need for original data collection from populations and communities which research shows have been historically targeted (in a racially discriminatory fashion) by cannabis law enforcement (Harris & Martin, 2021). These data would help us understand ways in which legalization has changed the nature of policing and the behavior of courts. They would also help in assessing whether trust in law enforcement and community-police relations have improved, as they are critical to ensuring public safety. These data collections efforts should include both surveys and qualitative studies and ensure that young men of color are included given their overall representation among those arrested for selling and possessing cannabis. These studies should explore, among other themes, how police interactions with the public have changed as a result of legalization, and whether police enforce legalization ordinances accurately and equally across groups. In addition, research should examine the use of diversion programs and health care facilities for young people who sell cannabis illegally or develop problematic drug use.

Appendix

Table 3.1A: Annual Count of Cannabis-Related Arrests in New Jersey (2010-19)

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Total	25632	24978	26929	26928	27210	26882	35126	37623	33661	33450
Age group										
18-20	7693	7897	7980	7641	7720	7730	9715	9827	7908	7554
21+	14191	13244	15127	15957	16380	16388	22351	24709	23056	23377
18+	21884	21141	23107	23598	24100	24118	32066	34536	30964	30931
Race										
White	15621	15907	16842	16199	16477	16376	21182	21986	18964	18121
Black or African American	9557	8503	9591	10181	10133	9935	13195	14821	14043	14690
Asian	0	0	0	497	546	520	662	735	562	465
American Indian or Alaska Native	58	59	53	51	52	51	87	81	81	49
Native Hawaiian	0	0	0	0	0	0	0	0	11	125
Gender										
Male	20916	20587	21942	21935	21658	21390	27037	28834	25679	25323
Female	4773	4590	5144	5189	5716	5726	8219	8965	8102	7890
Drug crime type										
Sales/ Production	3854	3258	3352	3266	3199	3059	3360	3122	2884	4585
Possession	21778	21720	23577	23662	24011	23823	31766	34501	30777	28865

Source: Uniform Crime Reports, Federal Bureau of Investigation. https://crime-data-explorer.fr.cloud.gov/pages/explorer/crime/arrest.

Table 3.2A: Annual Cannabis-Related Arrests in New Jersey per 100,000 Population (2010-19)

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Total	333	323	346	345	346	341	446	473	428	426
Age group										
18-20	2300	2241	2323	2245	2327	2363	2938	2915	2495	2335
21+	222	206	233	244	248	247	337	369	347	353
18+	325	312	338	343	348	346	461	491	445	445
Race										
White	289	293	311	300	306	303	389	402	355	340
Black or African American	930	827	933	963	959	949	1251	1389	1323	1381
Asian	0	0	0	71	76	70	88	94	74	61
American Indian or Alaska Native	378	373	335	385	435	374	496	548	371	313
Native Hawaiian	0	0	0	0	0	0	0	0	374	4676
Gender										
Male	562	550	583	578	568	559	707	745	672	664
Female	120	115	128	129	141	141	203	219	200	195
Drug crime type										
Sales/ Production	50	42	43	42	41	39	43	39	37	58
Possession	283	281	303	303	306	302	404	434	391	368

Source: UCR Crime Data Explorer, https://crime-data-explorer.fr.cloud.gov/pages/explorer/crime/arrest.

*All per population of adults 10 years old and over.

Table 3.3A: New Jersey Roadway Fatalities' Testing Summary Information (2015–19)

	2015	2016	2017	2018	2019
Fatalities	561	602	624	629	643
# fatalities with at least one driver drug tested	224	276	296	282	307
% fatalities with at least one driver drug tested	40%	46%	47%	45%	48%
# fatalities with at least one driver alcohol tested	224	280	297	282	306
% fatalities with at least one driver alcohol tested	40%	47%	48%	45%	48%
Drivers	750	827	863	832	834
# Drivers drug tested	355	419	445	425	432
% Drivers drug tested	47%	51%	52%	51%	52%
# Drivers alcohol tested	355	428	449	436	442
% Drivers alcohol tested	47%	52%	52%	52%	53%
Crashes	521	570	591	524	525
# Crashes with at least one driver drug tested	311	358	388	313	326
% Crashes with at least one driver drug tested	60%	63%	66%	60%	62%
# Crashes with at least one driver alcohol tested	312	366	390	321	332
% Crashes with at least one driver alcohol tested	60%	64%	66%	61%	63%

Source: Fatality Analysis Reporting System, National Highway Traffic Safety Administration. https://www.nhtsa.gov/research-data/fatality-analysis-reporting-system-fars.

Table 3.4A: New Jersey Traffic Fatalities Where Driver Tested Positive for Cannabis (2015-19)

	2015	2016	2017	2018	2019
Total fatalities	561	602	624	629	643
# fatalities driver tested positive for cannabis	34	55	67	101	106
% fatalities driver tested positive for cannabis	6%	9%	11%	16%	16%

Source: Fatality Analysis Reporting System, National Highway Traffic Safety Administration. https://www.nhtsa.gov/research-data/fatality-analysis-reporting-system-fars.

Table 3.5A: New Jersey Traffic Fatalities Where Driver Tested Positive for BAC>.08 (2015-19)

	2015	2016	2017	2018	2019
Total fatalities	561	602	624	629	643
# fatalities driver BAC>0.08	63	99	87	106	115
% fatalities driver BAC>0.08	11%	16%	14%	17%	18%

Source: Fatality Analysis Reporting System, National Highway Traffic Safety Administration. https://www.nhtsa.gov/research-data/fatality-analysis-reporting-system-fars.

Table 3.6A: Drug Enforcement Administration Cannabis Eradication and Suppression Program in New Jersey (2011-20)

	Total Eradicated Outdoor Grow Sites	Total Cultivated Plants Outdoor	Total Eradicated Indoor Grow Sites	Total Cultivated Plants Indoor	Total Cultivated Plants (Outdoor & Indoor)	Bulk Processed Marijuana (lb)	Number of Arrests	Assets Seized (Value)	Weapon Seizure
2011	31	633	29	1,727	2,360	32	64	$ 18,784	16
2012	29	735	16	1,046	1,781	519	38	$320,397	6
2013	6	72	10	655	727	38	14	$10,306	3
2014	MISSING	MISSING	MISSING	MISSING	MISSING	MISSING	MISSING	MISSING	MISSING
2015	5	29	3	86	115	3	8	$6,000	1
2016	3	5	3	66	71	31	8	$0	17
2017	2	112	8	1,994	2,106	16	11	$1,800	0
2018	1	10	5	110	120	40	7	$16,000	8
2019	4	18	7	107	125	1,003	27	$33,060	3
2020	0	0	3	1,400	1,400	48	6	$0	1

Source: Drug Enforcement Administration, Domestic Cannabis Eradication/Suppression Program. https://www.dea.gov/operations/eradication-program.

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Chapter 4

Public Health and Behavioral Services: The Use of Cannabis in New Jersey

Charles E. Menifield and Liliana Ordonez

Introduction

This chapter examines overall health conditions in New Jersey counties; substance abuse admissions to health care facilities; marijuana admission by age, race, and gender; youth substance use disorder; drug overdose mortality; suicide rates; and mental health providers. With respect to marijuana research and the clear medical ramifications of using the drug, it is very important that health outcomes are examined in any state that has legalized recreation marijuana. All of the data used in the chapter was collected from secondary sources.

New Jersey Health Data

The data in Figure 4.1 show the overall health status of New Jersey's counties in 2019. These data are compiled from health factors (health outcomes, health behaviors, clinical care, social and economic factors, and physical environment) such as premature death, low birth weight, adult smoking, adult obesity, physical activity, teen births, sexually transmitted diseases, uninsured residents, mental health providers, reading and math scores, violent crime, air pollution, drinking water violations, and the like.

The data in Figure 4.1 show a ranking of each county. Based on the data, Cumberland (21) and Salem (20) County had the lowest health rankings in the state followed by Atlantic (19) County. Morris, Hunterdon, Somerset and Bergen Counties had the highest rankings respectively in 2021. The report issued by the University of Wisconsin Population Health Institute also indicated that Cumberland County was rated lowest in health outcomes and health factors and Morris County, on the other hand, was rated number one in both health outcomes and health factors.

These data are important in providing an overall look at the health status of the state before retail sales of cannabis and related products in the state.

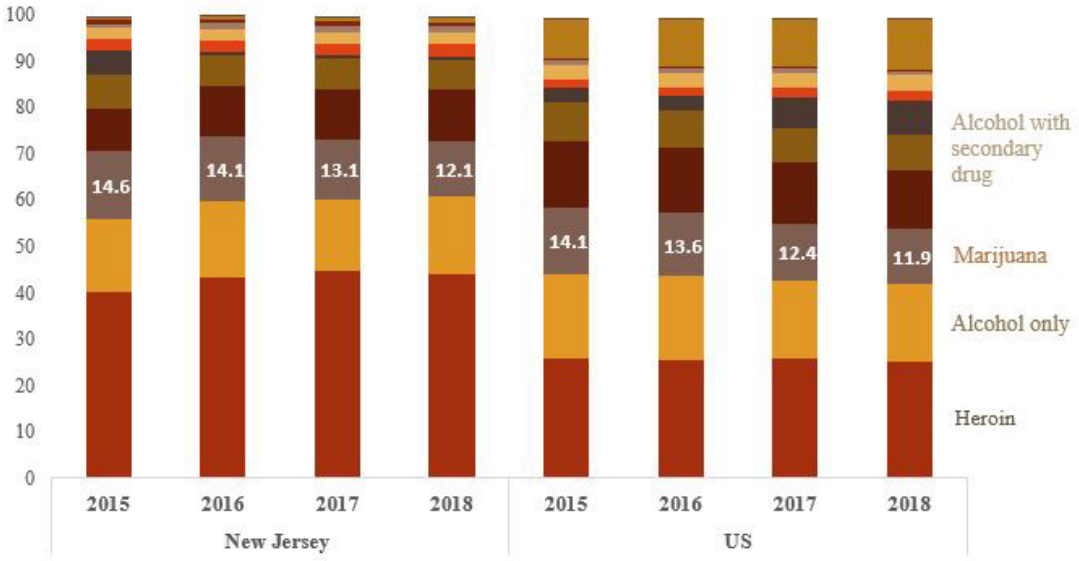
Figure 4.1: Health Factors by New Jersey Counties (2021)

2021 County Health Rankings for the 21 Ranked Counties in New Jersey	
Morris	1
Hunterdon	2
Somerset	3
Bergen	4
Monmouth	5
Sussex	6
Middlesex	7
Burlington	8
Warren	9
Mercer	10
Gloucester	11
Ocean	12
Union	13
Hudson	14
Cape May	15
Camden	16
Passaic	17
Essex	18
Atlantic	19
Salem	20
Cumberland	21

Source: County Health Rankings & Roadmaps: Building a Culture of Health, County by County. 2021.

The data for treatment admission rates indicate that heroin, alcohol, and marijuana were the three main substances for which people were admitted into medical facilities (see Figure 4.2). This trend applies to both New Jersey and the United States. However, in New Jersey, marijuana admissions as a percentage of the total population of those admitted has decreased by roughly 2% since 2015, while heroin admissions have increased over time. In fact, heroin admissions represent more than a third of all substance abuse admissions in New Jersey during this four-year period. The rate was never below 40% of admissions. The U.S. rate of marijuana admissions have declined over time while the percentage of heroin admissions were essentially flat and stable during the four-year analysis. The rate of New Jersey treatment admissions related to heroin is nearly double that of the U.S.

Figure 4.2: Admissions Aged 12 Years and Older, by Primary Substance, NJ and US (%)

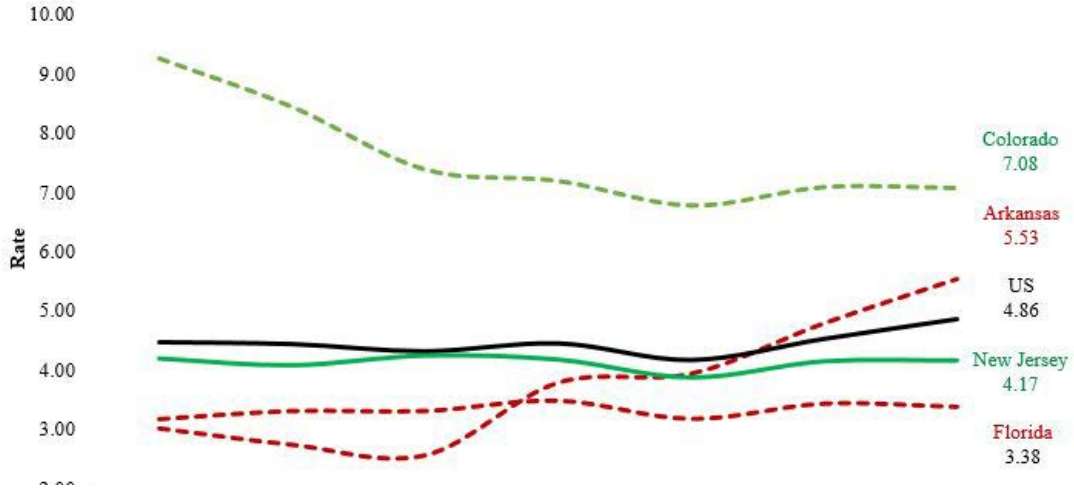


Source: Center for Behavioral Health Statistics and Quality, Substance Abuse and Mental Health Services Administration, Treatment Episode Data Set (TEDS). Based on administrative data reported by states to TEDS through April 1, 2021.

Figure 4.3 shows the number of substance abuse treatment facilities per 100,000 persons in various states in the U.S. New Jersey is consistently below the U.S. average for every year from 2013-2019. It is notable from this table that Colorado, one of the first states to legalize recreational marijuana, has a high percentage of facilities. It is also notable that the number of facilities in Colorado decreased over time. While instability in funding sources may account for the decrease in Colorado facilities (Keystone, 2017), a reduction in treatment admissions might reflect a more accepting public opinion of marijuana use since legalization. Additionally, the decrease in cannabis arrests and court-mandated treatment

might account for the reduction in marijuana users seeking addiction treatment services (Davis et al., 2016). The data from the 2021 Impact of Marijuana Legalization in Colorado report show that monthly usage rates from 2014-2019 did not decrease, but actually grew by 5.6% during that period (Reed 2021).

Figure 4.3: Number of Substance Abuse Treatment Facilities per 100,000 Population - US

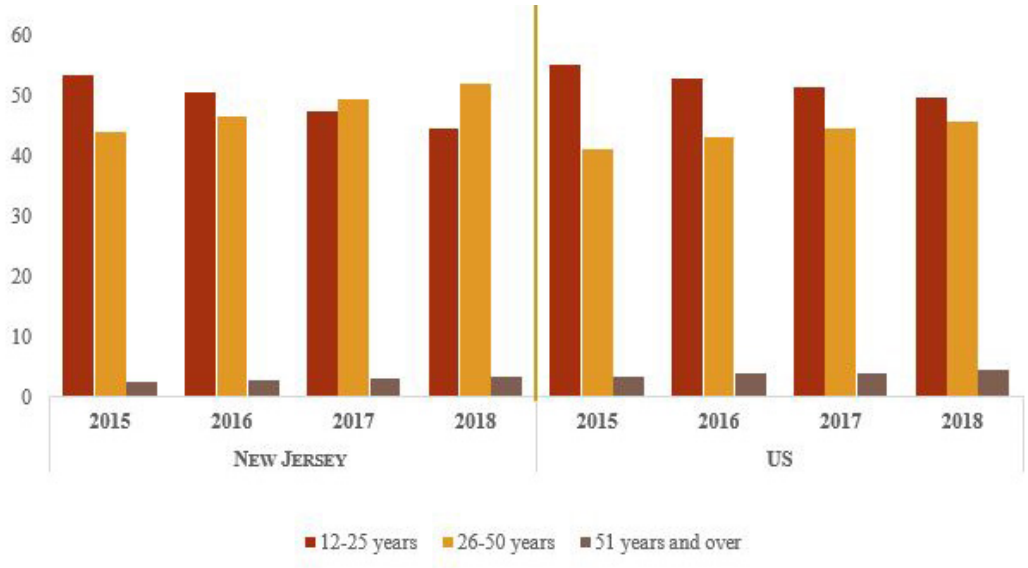


Source: The National Survey of Substance Abuse Treatment Services (N-SSATS) is an annual survey of facilities providing substance abuse treatment.

Note: Red indicates that the state does not have a recreational marijuana law and Green indicates that the state has passed a recreational marijuana law.

When we analyzed the data representing the number of marijuana admissions with marijuana as the primary substance of use, broken down by age, (detailed in Figure 4.4), we saw that the treatment admission rates decreased from 2015-2018 for those between the ages of 12-25 in New Jersey. This group also represented the largest group of those admitted in New Jersey in 2015 and 2016. Those aged 26-50 were the next largest group of those admitted and the data show that the rate of admissions increased during the period under observation. The rate for those 51 years of age and older was very low and the rate was stable for each year.

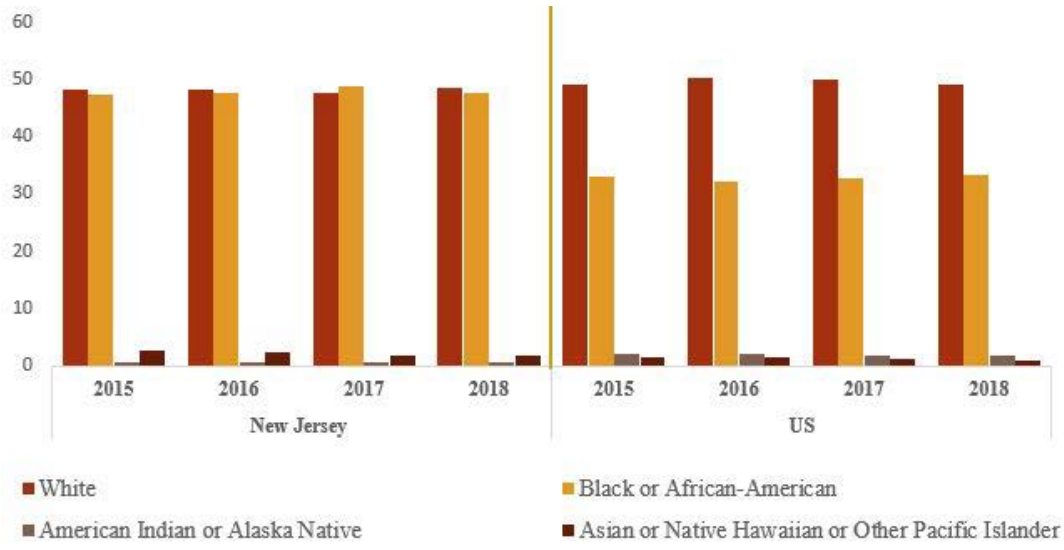
Figure 4.4: Marijuana Admissions - Facilities Providing Substance Abuse Treatment, by Age, NJ and US



Source: Center for Behavioral Health Statistics and Quality, Substance Abuse and Mental Health Services Administration, Treatment Episode Data Set (TEDS). Based on administrative data reported by states to TEDS through April 1, 2021.

Figure 4.5 shows the percentage of marijuana admissions by race in New Jersey and the U.S. About half of admissions into health care facilities in New Jersey were among white residents and half were among black residents consistently for the 2015-2018 period. The remaining groups were extremely low, falling below 4% in 2015 with lower rates for each year thereafter. But across the U.S., only about 30% of admissions to health care facilities related to marijuana use were for black individuals during each of the four years.

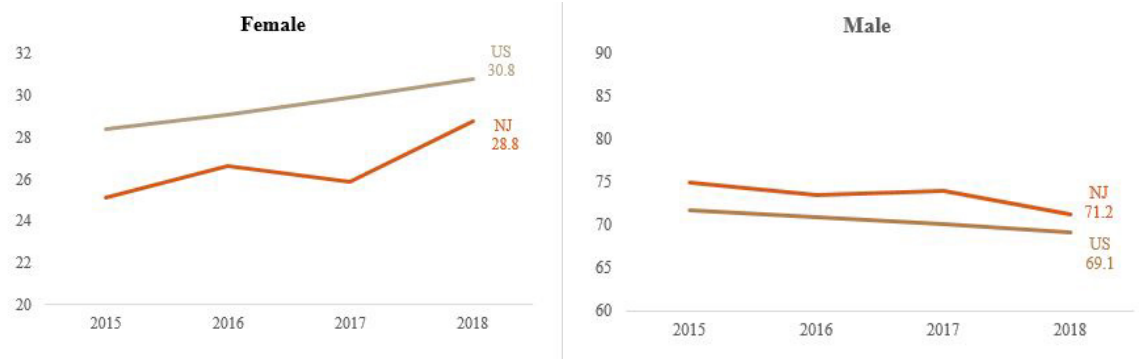
Figure 4.5: Marijuana Admissions, by Race, NJ and US



Source: Center for Behavioral Health Statistics and Quality, Substance Abuse and Mental Health Services Administration, Treatment Episode Data Set (TEDS). Based on administrative data reported by states to TEDS through April 1, 2021.

With respect to marijuana admissions by gender, female admissions to health care facilities have risen while the rate is dropping for males both in New Jersey and in the U.S. Figure 4.6 shows that 25% of those admitted into health care facilities in 2015 were female and 75% were males in New Jersey. By 2018, the females represented 28.8% of those admitted into health care facilities in New Jersey for marijuana abuse and males represented 71.2% of those admitted. The U.S. rate was very similar with females representing 28% of those admitted in 2015 and 30.8% in 2018. Males on the other hand represented 72% of those admitted for marijuana abuse in 2015 and 69.1% in 2018. Hence, the percentage of females admitted into treatment facilities in New Jersey grew at a faster rate than in the U.S.

Figure 4.6: Marijuana Admissions, by Gender, NJ and US



Source: Center for Behavioral Health Statistics and Quality, Substance Abuse and Mental Health Services Administration, Treatment Episode Data Set (TEDS). Based on administrative data reported by states to TEDS through April 1, 2021.

The data in Table 4.1 present the number of resident admissions by New Jersey counties in 2019. Essex County had the largest number of admissions followed by Hudson, Camden and Passaic. At the other end of the spectrum with fewer treatment admissions, Hunterdon, Salem, Warren, and Sussex round out the bottom four counties. Despite having the largest population in the state, Bergen County (932,202) was firmly in the middle grouping for these data (New Jersey Drug and Alcohol Abuse Treatment… 2019).

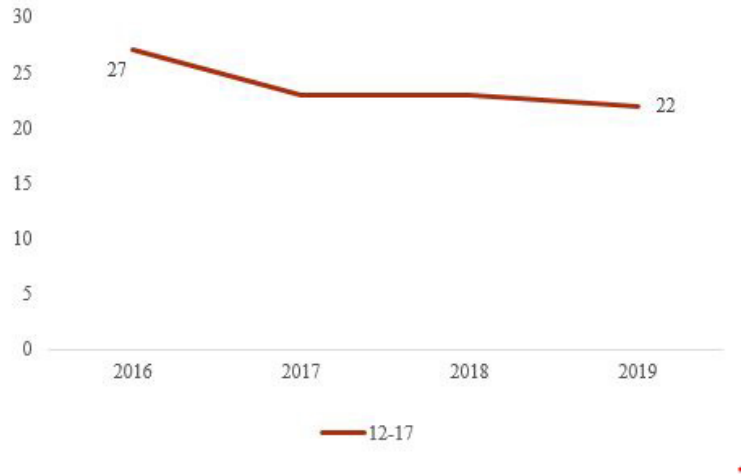
Table 4.1: Marijuana Resident Admissions by New Jersey Counties (2019)

	#	%		#	%
Atlantic	567	5	Middlesex	746	7
Bergen	519	5	Monmouth	538	5
Burlington	415	4	Morris	235	2
Camden	962	9	Ocean	703	7
Cape May	244	2	Passaic	854	8
Cumberland	317	3	Salem	92	1
Essex	1,282	12	Somerset	232	2
Gloucester	287	3	Sussex	154	1
Hudson	1,158	11	Union	476	5
Hunterdon	89	1	Warren	120	1
Mercer	544	5	Total	10,534	100%

Source: New Jersey Drug and Alcohol Abuse Treatment: Substance Abuse Overview 2019.

Figure 4.7 presents substance use disorder data for youth in the past year in New Jersey. As shown, the number of youth aged 12-17 in this category decreased over time. In 2016, 27,000 youth had a substance abuse disorder and that number decreased to 22,000 in 2019.

Figure 4.7: Youth Substance Use Disorder in the Past Year, New Jersey (000s)



Source: NSDUH Estimated Totals by State https://www.samhsa.gov/data/taxonomy/term/435.

Drug Overdose and Suicides

Table 4.2 displays drug overdoses by New Jersey counties from 2015-2019. It must be noted that none of the drugs included in this table include marijuana as the key factor attributing to death. The drugs included are: heroin, morphine, cocaine, fentanyl, oxycodone, and methadone. We included these data because the research shows that drug users combine drugs and marijuana could be included among the variety of drugs used.

As shown in Table 4.2, there was a lot of variety in the number of drug-related deaths by county. The data essentially followed the number of residents in each county. That is, counties with larger populations tended to have more drug-related deaths. However, there are several exceptions to that rule. For example, Bergen County had the largest population in the state in 2019, but several counties have more drug-related deaths in 2019. Specifically, Essex led the state with 414 drug-related deaths in 2019.

Essex County had the second highest population in the state in 2019 and it has led the state in drug-related deaths in all but one year of the analysis. Counties that are overrepresented in the data include: Atlantic, Burlington, Camden, and Gloucester. Counties that are underrepresented in the data based on population include: Morris and Somerset County.

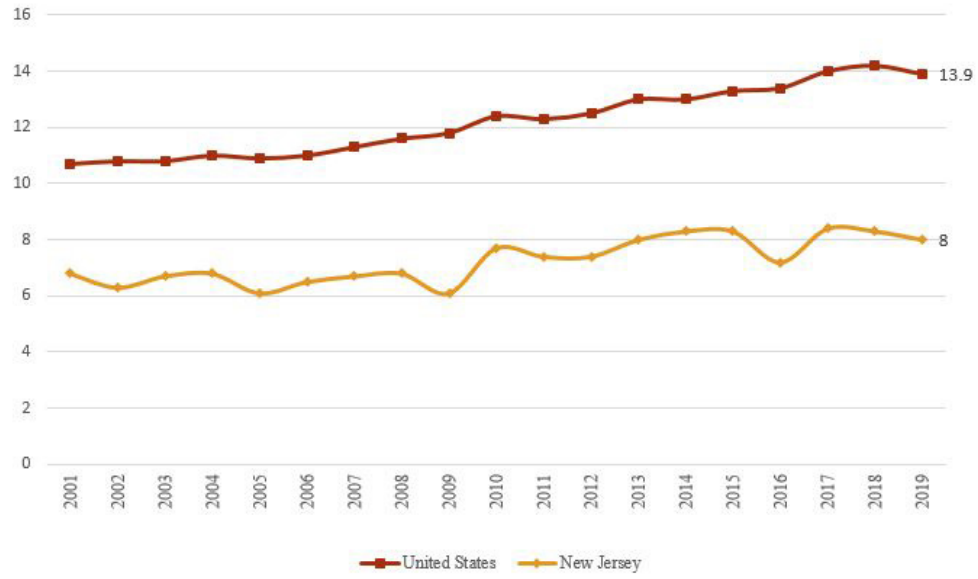
Table 4.2: New Jersey Drug-related Deaths

County	2015	2016	2017	2018	2019
Atlantic	85	171	169	190	171
Bergen	85	99	129	141	137
Burlington	87	96	149	159	154
Camden	191	200	307	327	352
Cape May	32	32	59	43	52
Cumberland	38	53	75	112	83
Essex	146	271	370	368	414
Gloucester	65	88	123	144	136
Hudson	107	127	141	174	174
Hunterdon	14	20	22	19	11
Mercer	59	59	106	138	119
Middlesex	106	182	235	204	208
Monmouth	122	164	172	215	185
Morris	44	71	89	88	91
Ocean	157	253	189	219	191
Passaic	83	108	131	182	165
Salem	18	18	19	31	41
Somerset	35	44	49	50	41
Sussex	25	36	36	34	39
Union	67	98	131	138	132
Warren	21	31	36	30	18
Total	1587	2221	2737	3006	2914

Source: NJ Cares Suspected Overdose Deaths - New Jersey Office of Attorney General (njoag.gov). https://www.njoag.gov/programs/nj-cares/nj-cares-suspected-overdose-deaths/.

Figure 4.8 presents suicide rates per 100,000 persons in New Jersey and the U.S. The number of suicides has gradually increased each year from 2001-2019. The gap between the U.S. average and New Jersey has increased over time. Since 2017, the rate has been dropping in New Jersey.

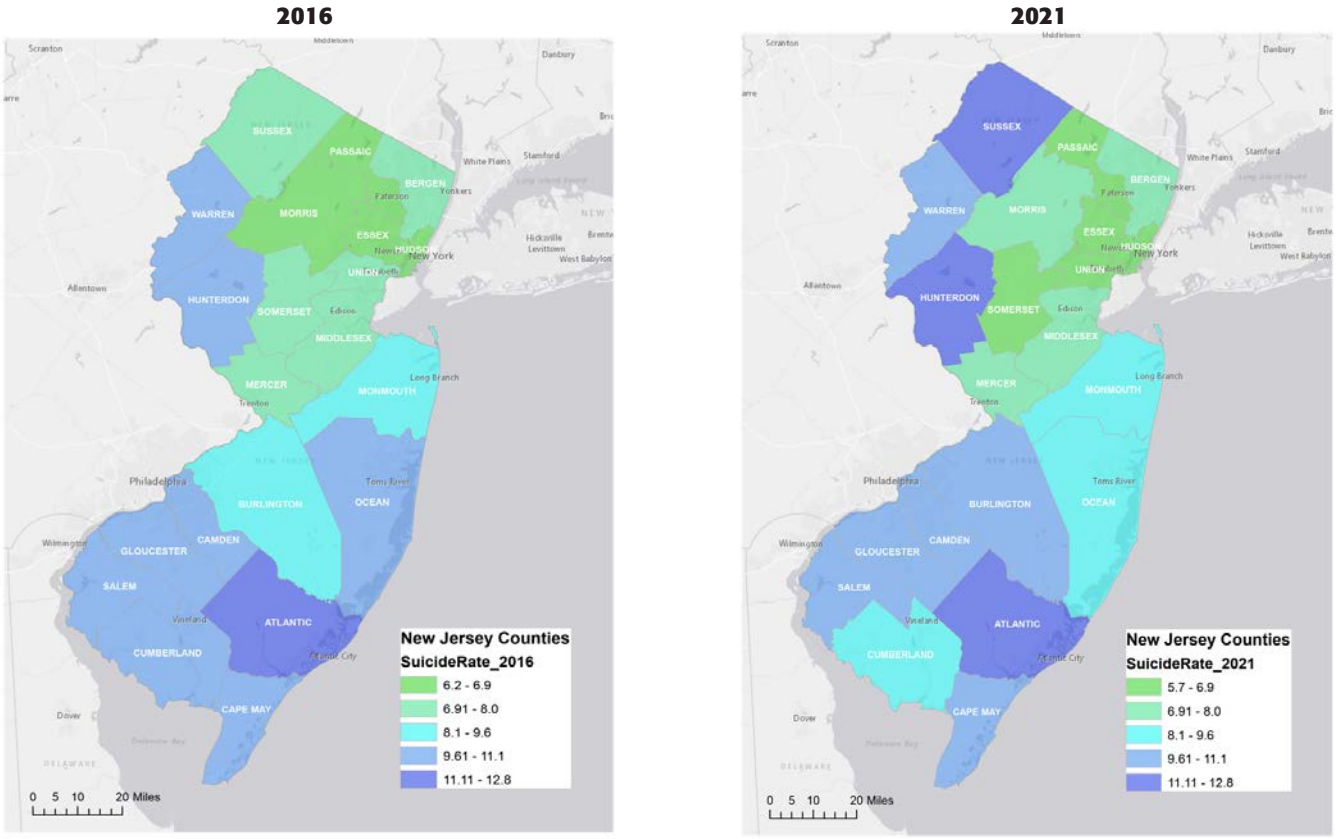
Figure 4.8: Suicide Rate per 100,000 Individuals, NJ and US



Source: https://www.kff.org/state-category/mental-health/suicide/.

Map 4.1 shows suicide rates per 100,000 residents within New Jersey counties in 2016 and 2021. The rate of suicides grew in the southern counties and in the northwestern counties during this period. Overall, suicides have increased throughout the state.

Map 4.1: Suicide Rate per 100,000 Individuals by New Jersey Counties

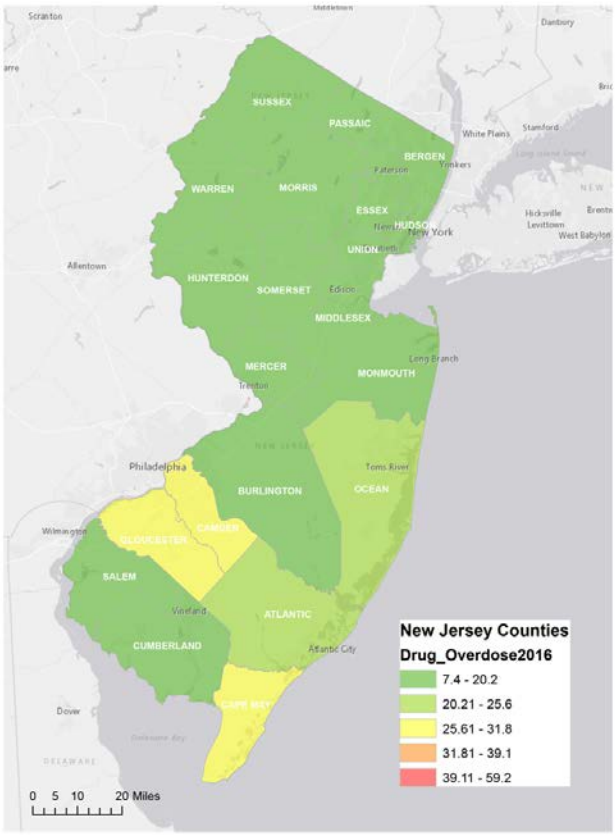


Source: County Heath Rankings and Roadmaps https://www.countyhealthrankings.org/app/new-jersey/2016/downloads

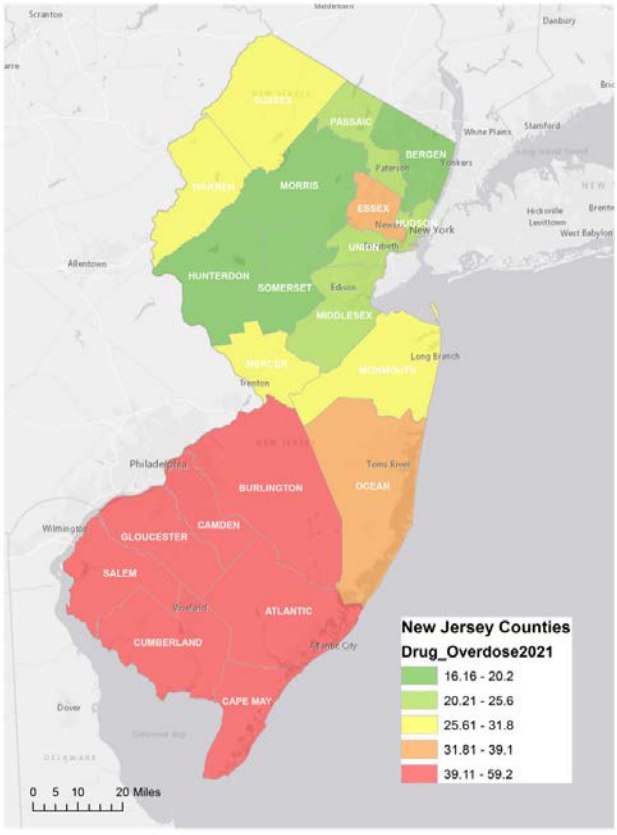
Map 4.2 depicts drug overdoses in the state in 2016 and 2021. The southern counties in the state have a high percentage of drug overdoses in comparison to the rest of the state. Over time, the northern counties saw a reduction in the drug overdose rate.

Map 4.2: Drug Overdose Rate by N.J. Counties

2016



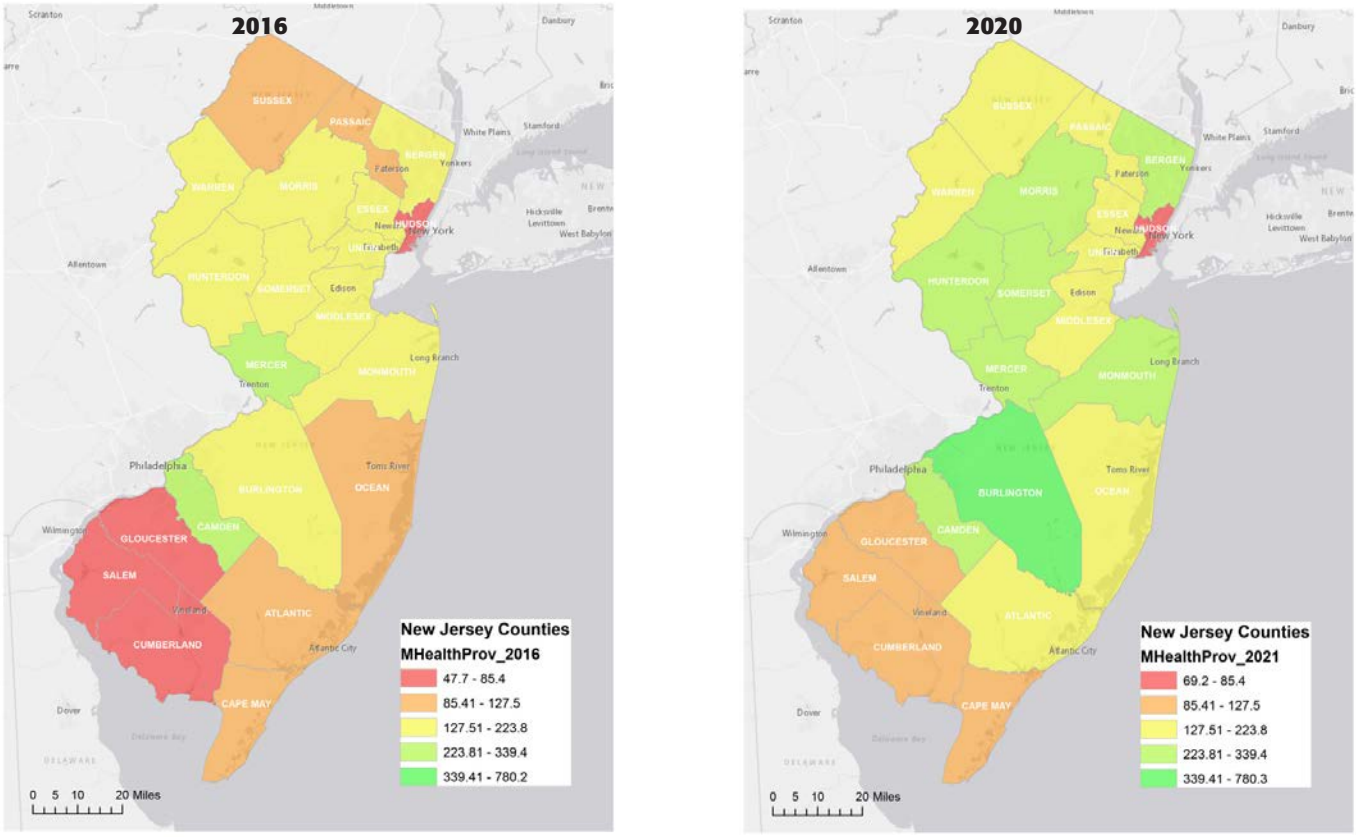
2021



Source: County Heath Rankings and Roadmaps https://www.countyhealthrankings.org/app/new-jersey/2016/downloads

Research indicates an association between higher incidences of serious mental illness and states with more liberal cannabis laws (Dutra et al., 2018). Given the prevalence of current marijuana usage in New Jersey, we assumed that there will be a need to provide additional mental health providers in the state. Map 4.3 therefore depicts the number of mental health providers in New Jersey in 2016 and 2020. The number of mental health providers in the state increased during these two periods. Overall, the southern counties had fewer providers, which was consistent with the size of the population, but not neccesarily consistent with other health outcomes.

Map 4.3: Mental Health Providers per 100,000 Residents by NJ Counties



Source: County Heath Rankings and Roadmaps https://www.countyhealthrankings.org/app/new-jersey/2016/downloads

Summary

The goal of this chapter was to provide a snapshot of the overall health conditions in the state as well as marijuana admissions by age, race, and gender; youth substance use disorders; drug overdose mortality; suicide rates; and mental health providers.

The data that we located provide a wide range of rankings with respect to health factors in the twenty-one New Jersey counties. Cumberland, Salem and Atlantic Counties had the lowest health ratings in the state respectively. This ranking was based on a combination of health outcomes. Morris, Hunterdon, and Somerset had the best health factor rankings in the state. While these are rankings, the data suggest that there is a great variety in associated health outcomes in the state. Those measures include length of life, quality of life, health behaviors, clinical care, and various social and economic factors. Based on our analysis, an increase in recreational marijuana use is likely to impact these rankings in the future.

Admissions to treatment facilities related to marijuana abuse for those aged 12 and older decreased from 2015-2018, but the percentage of those admitted for heroin use has increased over time. Marijuana admissions in the U.S. also decreased during this period when compared to other substances. When broken down into smaller units, marijuana admission rates for those aged 12-25 have decreased over time while admissions for those between the ages of 26 and 50 have increased incrementally each year both in the U.S. and in New Jersey. The treatment admission rate for those older than 50 was flat both in New Jersey and in the U.S. during the 2015-2018 period.

With respect to race, in New Jersey, the number of black and white individuals admitted for treatment was very similar for the 2015-2018 period. However, across the country, the number of admissions of white users was much higher than black users. The admission rates were negligible for the other groups (data for Hispanics were not available). The data for admissions by gender indicate that women are representing a larger share of those admitted in New Jersey and in the U.S.

Drug-related deaths in New Jersey increased for the period 2015-2019 in virtually every county in the state. In many cases, the number of deaths more than doubled. For example, Essex County had 146 deaths in 2015 and 414 in 2019. Camden, Middlesex, Union, Passaic, Gloucester, Mercer, Atlantic and Burlington also had double-digit increases. However, two counties had a lower number of drug-related deaths during this period (Hunterdon and Warren). Due to the overwhelming death toll of the opioid epidemic, we suspect that these numbers are likely to increase in the short term. However, research indicates that in the long-term, opioid overdoses decrease where marijuana is legalized due to patients switching from opioid-based narcotics to marijuana to deal with chronic pain (Shah et al., 2019).

While suicide rates in New Jersey have increased at a slower pace than the U.S. since 2001, the data pointed to increased rates of suicides in several counties between 2016 to 2021. This includes Sussex and Hunterdon counties. Overdose rates followed a similar trend, with increased numbers in the furthermost northeastern counties as well as the entire southern part of the state. Finally, the data indicated an increase in the number of mental health providers in essentially every county in the state. Particular increases were noted in the southern- and northern-most counties.

Policy Implications

Given the variety in the health rankings and the status of individual counties on specific health factors, it is highly likely that the state will see changes in the overall health rankings and specific health factors, as marijuana usage can contribute to a number of health outcomes. Hence, it behooves the state marijuana regulatory commission to monitor health data more closely as well as marijuana use patterns and potential marijuana adverse health effects among New Jersey residents. Given the increases in the percent of marijuana admissions in health facilities among 26-50 year-old users, it is also advisable that state officials consider the need for additional health facilities as well as marketing materials highlighting the risks associated with the use of marijuana.

Despite the fact that marijuana use appears to be declining among youth aged 12-25 in New Jersey and the U.S., we argue that the state should be vigilant in their marijuana education programs and prioritize preventing and reducing youth use. Young black males are particularly at risk of suffering subsequent depressive symptoms with marijuana use (Assari et al. 2018). In addition, research by Keyes et al. (2017) indicates that marijuana use tended to be higher among black high school students than among students of other races. Although we found literature that argued that marijuana use may not change after legalization and the perceived harm associated with marijuana use may in fact decline among youth after legalization (Brooks-Russel et al. 2018), the potential health impacts on youth should be monitored closely.

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Chapter 5

Youth School Experiences and Educational Outcomes in New Jersey: A Baseline Analysis

Vandeen Campbell and Lucas Brunskill

Introduction

This chapter focuses on youth school experiences and outcome areas which may be sensitive factors associated with the legalization of marijuana. The baseline school-related data collated here provide valuable references to monitor trends concerning New Jersey's youth population following the legalization of recreational marijuana. Other states that have legalized marijuana have similarly examined these trends to later determine the effect legalization has had on youth. As marijuana use has been associated with differences in psychosocial behaviors, educational attainment, and life outcomes (Center for Disease Control and Prevention, 2017), we selected baseline data related to school behaviors, school climate, and secondary outcomes. Specifically, we present data on the rates of disciplinary actions and behavioral incidents, criminal legal system involvement in school, high school graduation and drop-out rates, and postsecondary school enrollment. Where possible, trends were shown for gender and racial/ethnic subgroups to identify any pre-existing disparities. Later, monitoring of how youth school experiences and outcomes have changed since marijuana legalization in New Jersey would allow future trends to be compared to these baseline data, attending to differences in school experiences and outcomes. The chapter closes with a discussion of policy implications in which we discuss gaps in data availability and structure that, if unaddressed, will likely limit the extent to which these factors can be monitored.

Data Sources

The research team collated education data from several public sources - National Center for Education Statistics (NCES), New Jersey Department of Education (NJDOE), and the Civil Rights Data Collection (CRDC). NCES is the primary federal entity for collecting and analyzing data related to education. It draws on a wide array of surveys and administrative datasets to present education statistics at the state and national levels. We pulled data on high school dropout and completion rates from NCES. NJDOE reports a wide range of statewide education data. We used the series of NJDOE's reports titled, "Violence, Vandalism and Substance Abuse in New Jersey Schools: The Commissioner's Annual Report to the State Legislature" in the section on disciplinary actions in New Jersey schools. We also used NJDOE school performance reports to supplement NCES school completion data. NJDOE calculates and reports four-year adjusted cohort graduation rates, a more current measure of high school graduation rates. CRDC is a biennial survey required by the U.S. Department of Education's Office for Civil Rights (OCR).

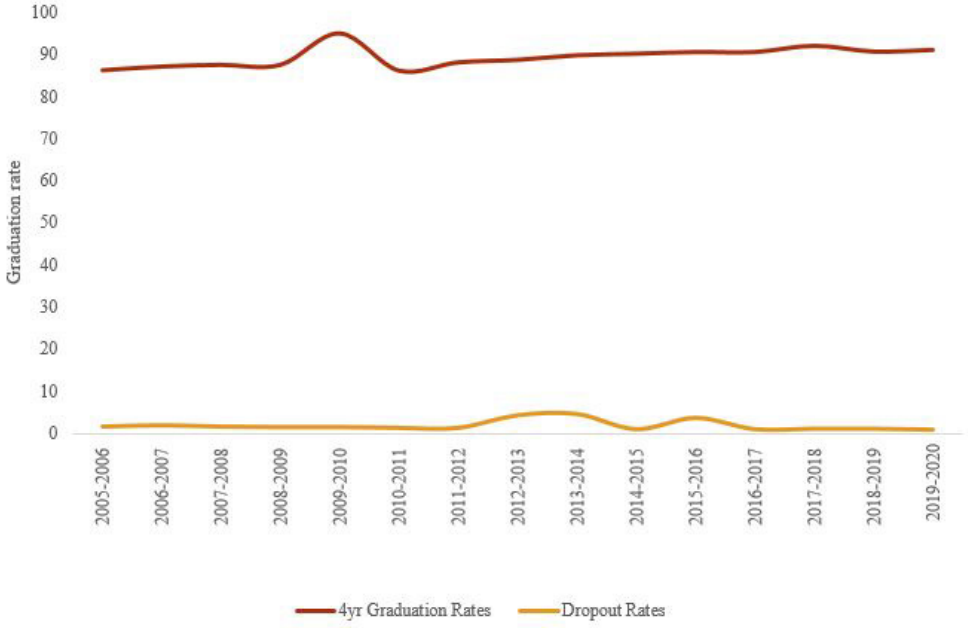
CRDC collects data on leading civil rights indicators related to access and barriers to educational opportunity at the early childhood through grade 12 levels.

School Data

Graduation & Drop-out Rates

As Figure 5.1 shows, New Jersey's high school graduation rates have increased since 2011 relatively consistently. As of 2020, 91% of the state's freshman cohort graduated from high school in four years. The state's dropout rate has remained at about 1% between 2017 and 2020. Maps 5.1 and 5.2 show that New Jersey's graduation rates have been among the highest in the nation and its drop-out rates among the lowest.

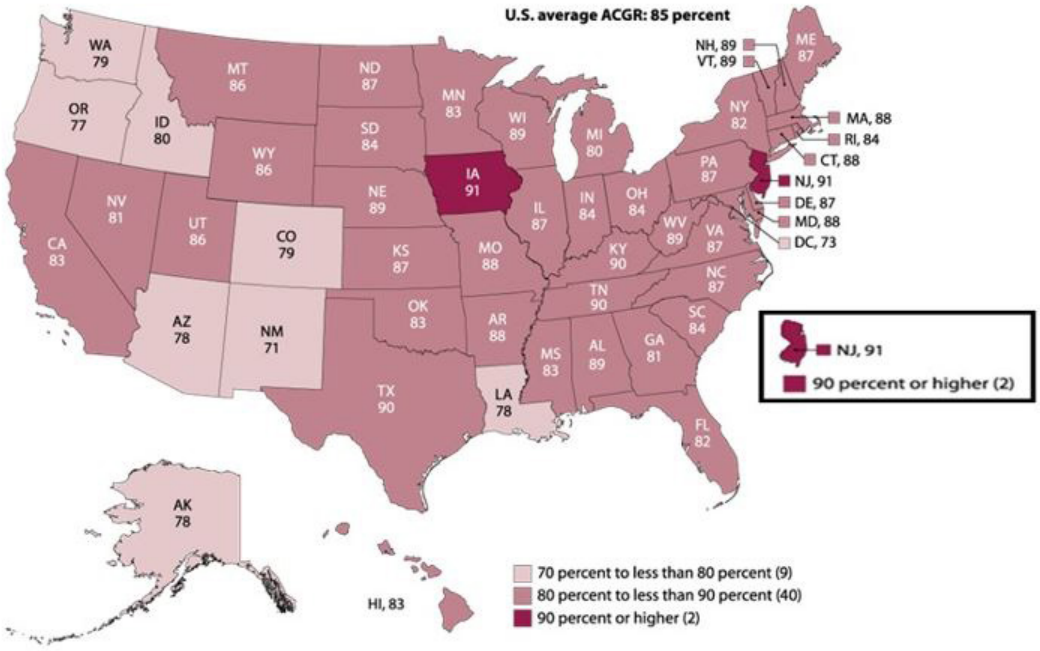
Figure 5.1: New Jersey Graduation & Dropout Rates (2005–20)



Source: NJDOE https://rc.doe.state.nj.us/state/detail/postsecondary?lang=EN and NCES https://nces.ed.gov/ccd/pub_dropouts.asp.

Note: New Jersey introduced the Adjusted Cohort Graduation Rate (ACGR) calculation in 2011 to align with federalrequirements to calculate the graduation rate based on the 9th grade cohort adjusted for students with verified transfers out and students who newly enroll in a given school. Prior to 2011, the Averaged Freshman Graduation Rate (AFGR) calculation was used. Although we show trends from 2005-2020, trends prior to 2011 are not comparable to trends thereafter.

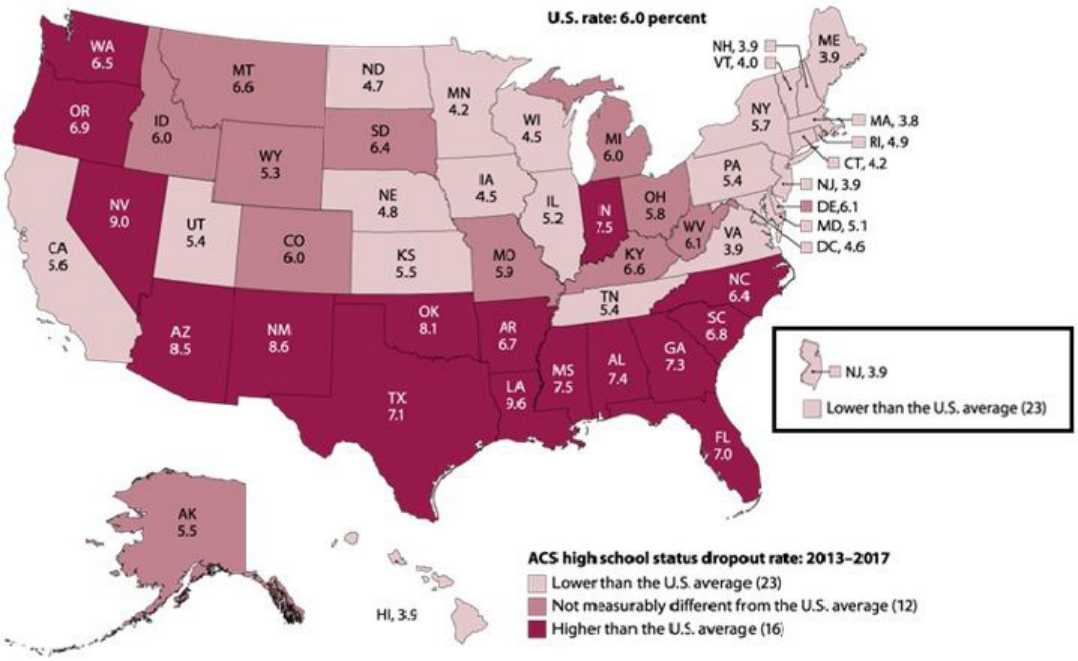
Map 5.1: Adjusted Cohort Graduation Rate (ACGR) of Public High School Students, by State (2016–17)



Source: https://nces.ed.gov/programs/dropout/ind_04.asp.

Note: The Adjusted Cohort Graduation Rate is the percentage of public high school students who graduate with a regular diploma within 4 years of starting 9th grade.

Map 5.2: Percentage of High School Dropouts among Persons 16 through 24 years old (status dropout rate), by State (2013–17)

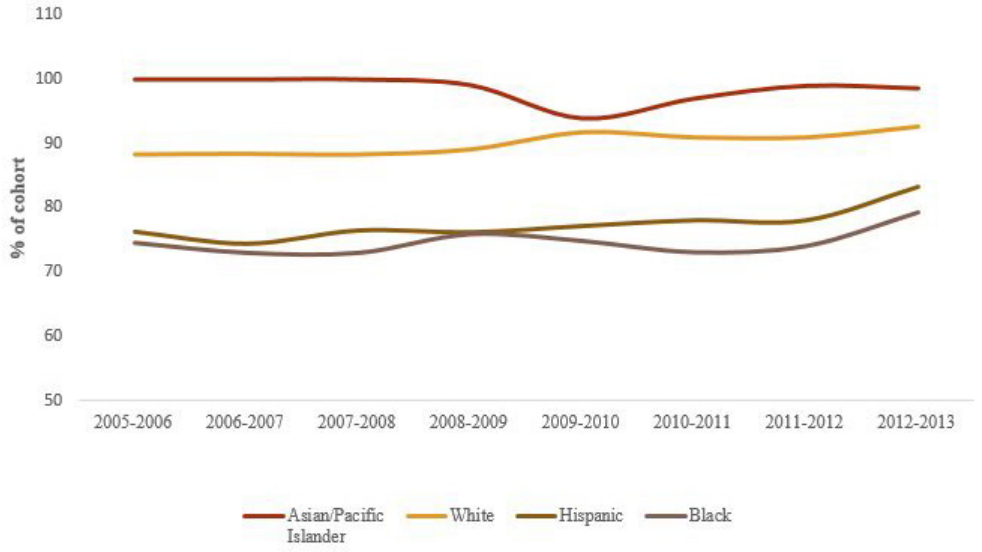


Source: https://nces.ed.gov/programs/dropout/images/fig2_6.png.

Note: The status dropout rate is the percentage of 16- to 24-year-olds who are not enrolled in school and have not earned a high school credential (either a diploma or an equivalency credential such as a GED certificate).

Despite overall high graduation rates, a sizeable gap in graduation rates persists among New Jersey students by race/ethnicity. Asian/Pacific Islander and white students have retained noticeably higher graduation rates than Latinx and black students, measured both by the Averaged Freshman Graduation Rate (Figure 5.2) and the Adjusted Cohort Graduation Rate (Figure 5.3) – although graduation rates have been trending upwards among Latinx and black students in recent years. Graduation rates among Asian/Pacific Islander students remained above 95% from 2014 to 2020, between 90% and 95% among white students, and between 76% and 86% among black and Latinx students. Graduation rates among American Indian/Alaska Native students (not shown in the chart) fluctuated considerably between 60% and 99%, possibly due to inconsistent measurement or small population sizes.

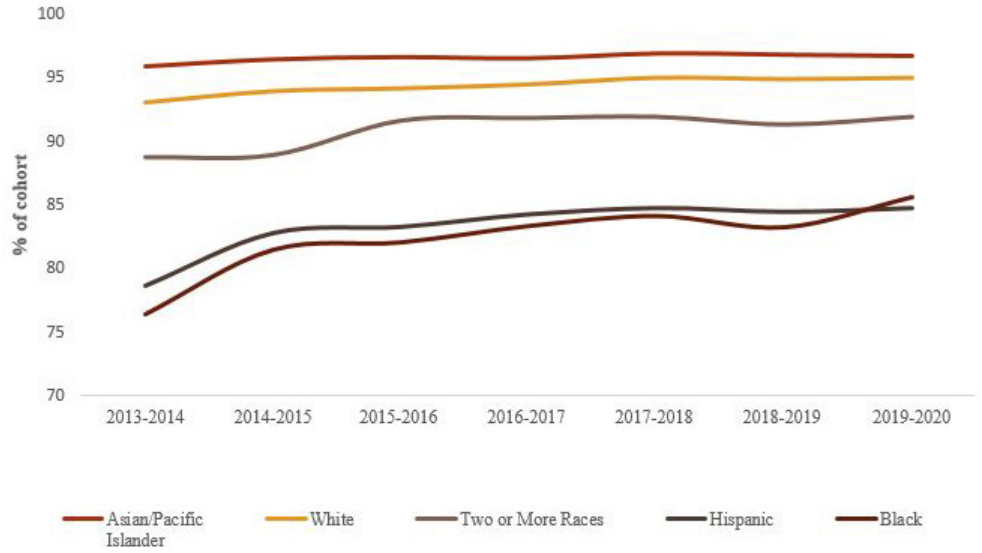
Figure 5.2: Averaged Freshman Graduation Rates by Race/Ethnicity



Source: https://nces.ed.gov/ccd/pub_dropouts.asp.

Note: The AFGR provides an estimate of the percentage of high school students who graduate on time. The rate uses both aggregate student enrollment data to estimate the size of an incoming freshman class and counts of the number of diplomas awarded four years later.

Figure 5.3: Adjusted Cohort Graduation Rates by Race/Ethnicity, New Jersey (2013–20)

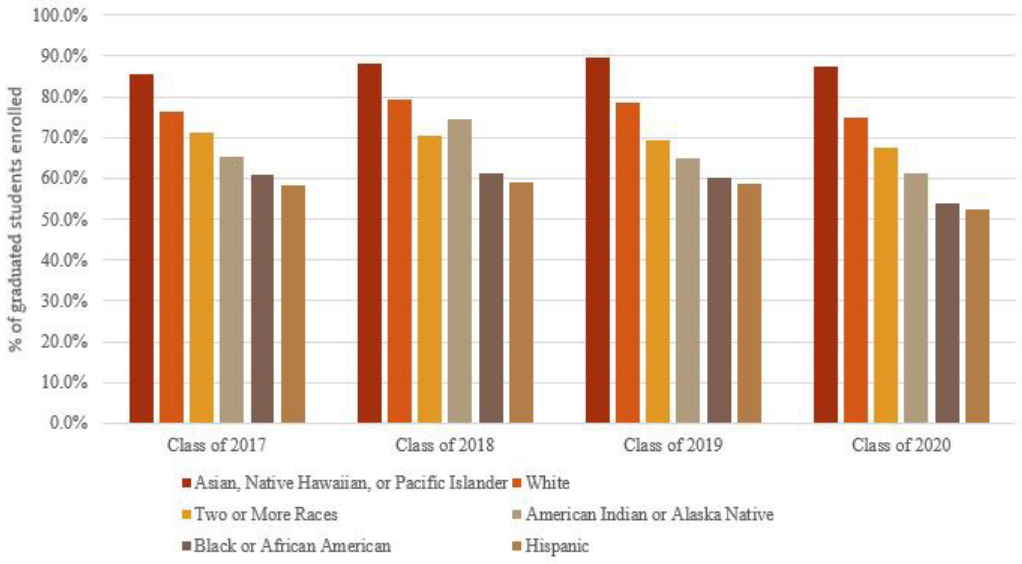


Source: https://www.nj.gov/education/schoolperformance/grad/ACGR.shtml.

Postsecondary Enrollment Educational Attainment

The following graphs show the percentage of New Jersey high school graduates enrolled in any postsecondary institution – either 2-year or 4-year – both in the fall of their high school graduation year as well as 16 months after (the following fall) by race/ethnicity. From 2017 to 2020, Figure 5.4 shows that Asian/Native Hawaiian/Pacific Islander students had the highest percentage of enrollment in the fall semester (85%-90%), followed by white students (75%-80%), two or more races (67%-71%), American Indian or Alaska Native (61%-75%), black or African American (54%-61%), and Latinx students (52%-60%). Figure 5.5 shows similar corresponding percentages for students enrolling 16 Months after their high school graduation: Asian/Native Hawaiian/Pacific Islander (between 86%-92%), white (79%-83%), two or more races (75%-78%), American Indian or Alaska Native (71%-77%), black or African American (66%-68%), and Hispanic students (64%-67%).

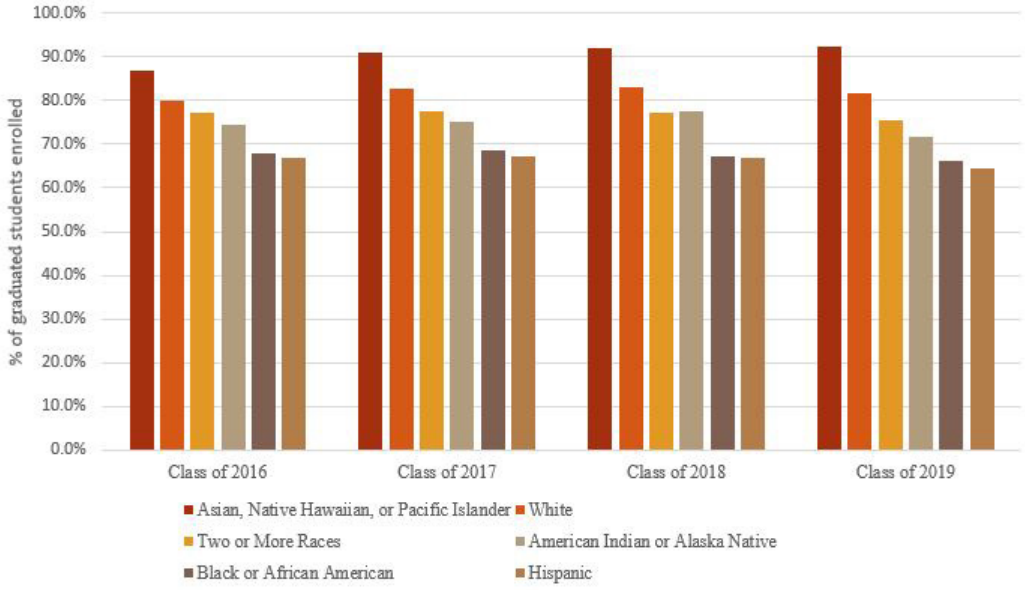
Figure 5.4: Postsecondary Enrollment Rates, In Any Institution: Fall, by Race/Ethnicity



Source: NJ Department of Education https://rc.doe.state.nj.us/state/detail/postsecondary?lang=EN.

Note: Undergraduate enrollment is down nationwide for 2019-2020 compared to the same time last year. As a result, caution should be used in comparing this year's results to prior or future years.

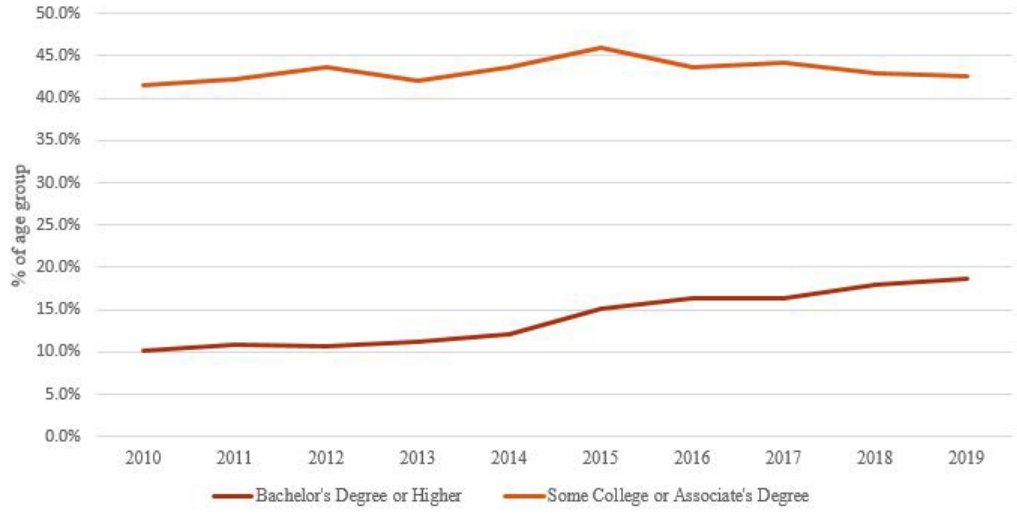
Figure 5.5: Postsecondary Enrollment Rates, In Any Institution:16 Month by Race/ Ethnicity



Source: NJ Department of Education https://rc.doe.state.nj.us/state/detail/postsecondary?lang=EN.
Note: Undergraduate enrollment is down nationwide for 2019-2020 compared to the same time last year. As a result, caution should be used in comparing this year's results to prior or future years.

Shown below in Figure 5.6 are educational attainment rate estimates for 18-24 year-olds in New Jersey. From 2010-2019, attainment rates for Some College or Associate Degrees were much higher than Bachelor's Degrees or higher. Rates for Some College or Associate Degrees remained relatively consistent around 40-45%, while Bachelor's Degrees rose steadily from 10-11% in 2010-2013, to 12-16% from 2014-2016, and 16-19% from 2017-2019.

Figure 5.6 Educational Attainment Rate Estimates, 18-24 Year-Olds (2010-19)

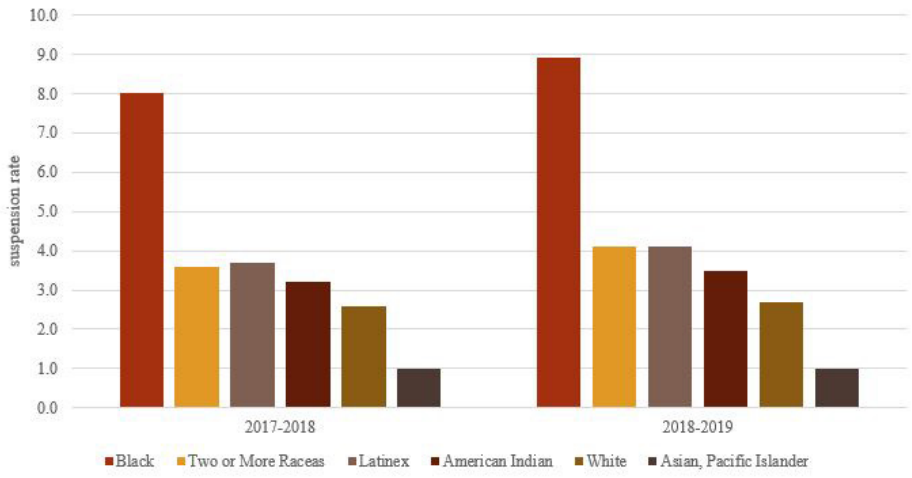


Note: No data available for Native Hawaiian and Other Pacific Islander
Source: https://data.census.gov/cedsci/table?t=Educational%20Attainment&g=0400000US34&y=2019.

Disciplinary Actions in Schools

In the area of school discipline, there were noticeable gaps between New Jersey students by race/ethnicity within the last ten years, with black students experiencing much higher suspension rates than other students (Figures 5.7-5.9). In 2018, the suspension rate for black students was 8% and in 2019 it was 8.9%, while rates for all other students were near 4% or lower. Latinx students and those of two or more races generally had the next highest suspension rates, followed by American Indian and white students, while Asian/Pacific Islander students had the lowest suspension rates by considerable margins (Figures 5.7). One notable outlier can be seen in Figure 5.9, where the percentage of white and Latinx students who received one or more in-school suspensions is close to that of black students - this was the only case where the percentage of black students suspended was comparable to other groups. Data on American Indian/Alaska Native students were again inconsistent, along with students of two or more races, although their reported suspension rates and percentages were on the lower end. The above trends were subsequently mirrored in students who missed school due to suspensions (Figure 5.10).

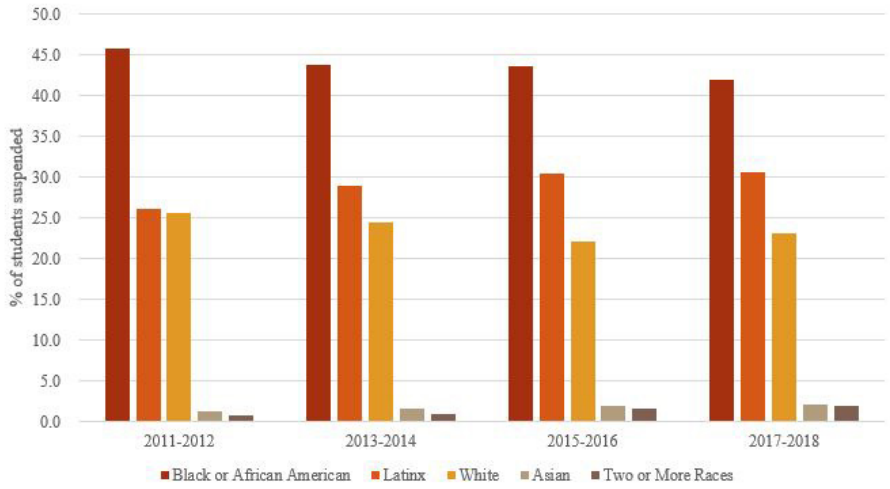
Figure 5.7: Suspension Rate by Race/Ethnicity, New Jersey (2017–19)



Source: https://www.nj.gov/education/schools/vandv/.

Note: Beginning with the 2017-18 school year, the SSDS began collecting all student suspensions and other removals.

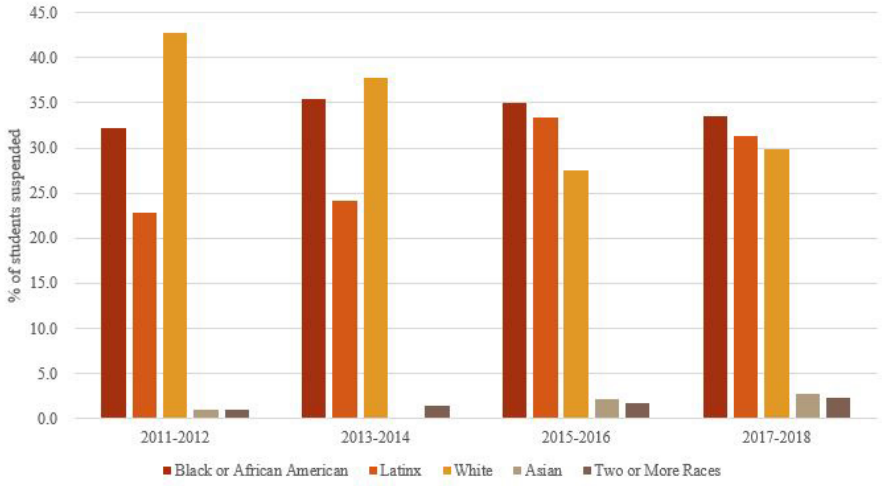
Figure 5.8: One or More Out-of-School Suspensions by Race/Ethnicity, New Jersey (2011–18)



Source: https://ocrdata.ed.gov/estimations/2017-2018.

Notes: Data by race/ethnicity were collected only for students with and without disabilities served under the Individuals with Disabilities Education Act (IDEA), but not for students with disabilities served solely under Section 504 of the Rehabilitation Act of 1973. American Indian/Alaska Native & Native Hawaiian or Other Pacific Islander taken out due to small N sizes.

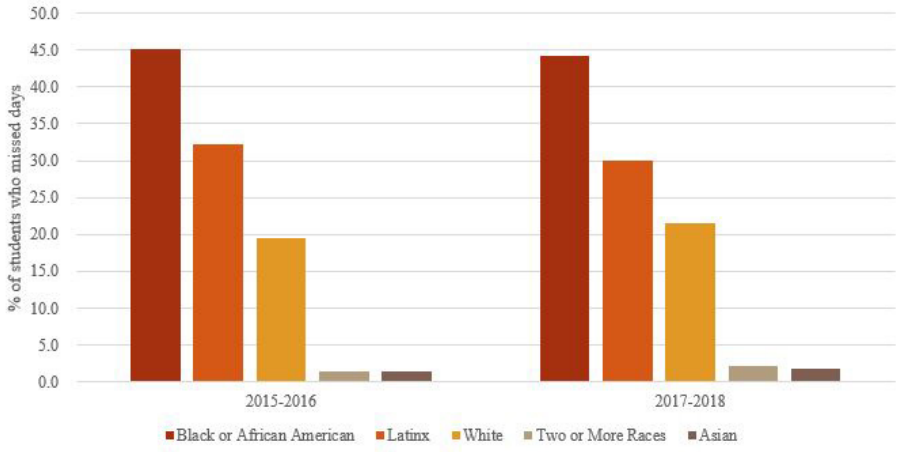
Figure 5.9: One or More In-School Suspensions by Race/Ethnicity, New Jersey (2011–18)



Source: https://ocrdata.ed.gov/estimations/2017-2018.

Notes: Data by race/ethnicity were collected only for students with and without disabilities served under the Individuals with Disabilities Education Act (IDEA), but not for students with disabilities served solely under Section 504 of the Rehabilitation Act of 1973. American Indian/Alaska Native & Native Hawaiian or Other Pacific Islander taken out due to small N sizes.

Figure 5.10: Days Missed Due to Out-of-School Suspensions by Race/Ethnicity, New Jersey (2015–18)

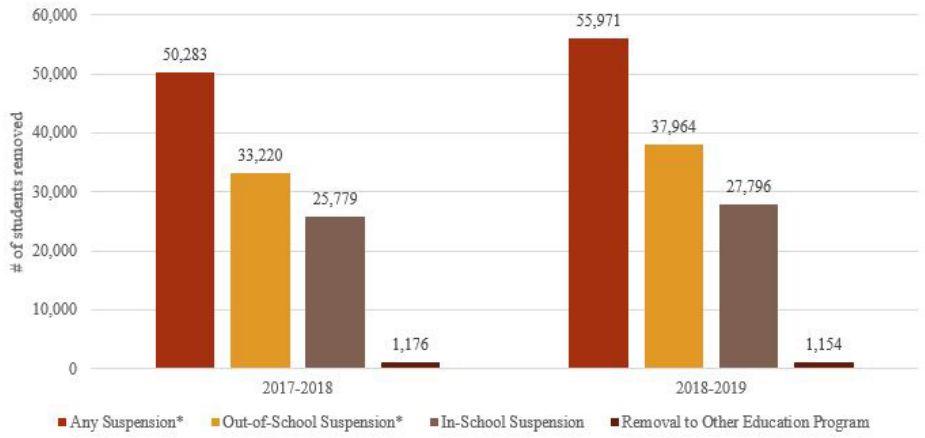


Source: https://ocrdata.ed.gov/estimations/2017-2018.

Notes: Data by race/ethnicity were collected only for students with and without disabilities served under the Individuals with Disabilities Education Act (IDEA), but not for students with disabilities served solely under Section 504 of the Rehabilitation Act of 1973. American Indian/Alaska Native & Native Hawaiian or Other Pacific Islander taken out due to small N sizes.

When disciplinary action required the removal of students from school or classes, suspensions were the most common type of discipline used in recent years, with out-of-school suspension slightly exceeding in-school suspension by roughly 10,000 students in both 2018 and 2019 (Figure 5.11). Removal to other education programs was far less common than suspension, and expulsions from New Jersey schools were rare to the point that they have been excluded from the presented data due to negligible sample sizes.

Figure 5.11: Students Removed from School by Type of Removal, New Jersey (2015–18)



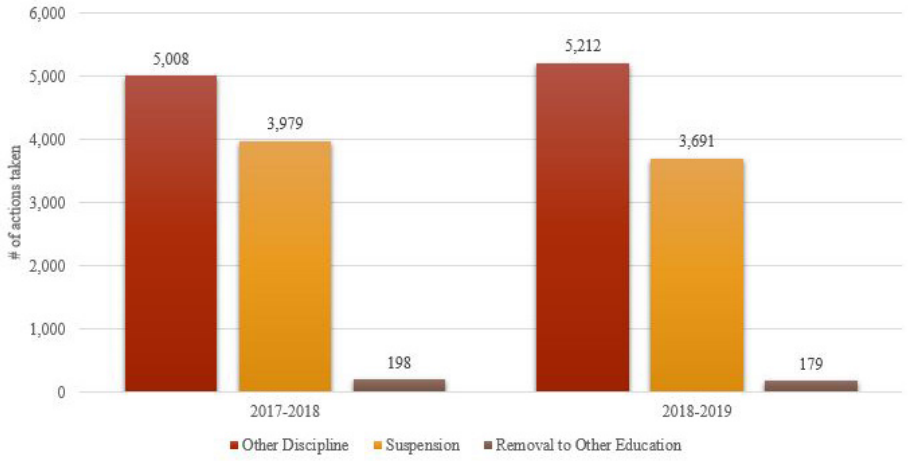
Source: https://www.nj.gov/education/schools/vandv/.

Note: Beginning with the 2017-18 school year, the Student Safety Data System (SSDS) began collecting all student suspensions and other removals. Expulsion taken out due to small N sizes.

*These counts include students with disabilities who received unilateral removals or removals by a hearing officer.

Figure 5.12 shows that there was a sizeable gap between other discipline, suspension, and removal to other education program – expulsion data are again rare and omitted – in disciplinary actions in response to incidents of harassment, intimidation, and bullying (HIB) in New Jersey schools; the non-descript category of "other discipline" was the most common response.

Figure 5.12: Harassment Intimidation and Bullying Disciplinary Actions, New Jersey (2017–19)



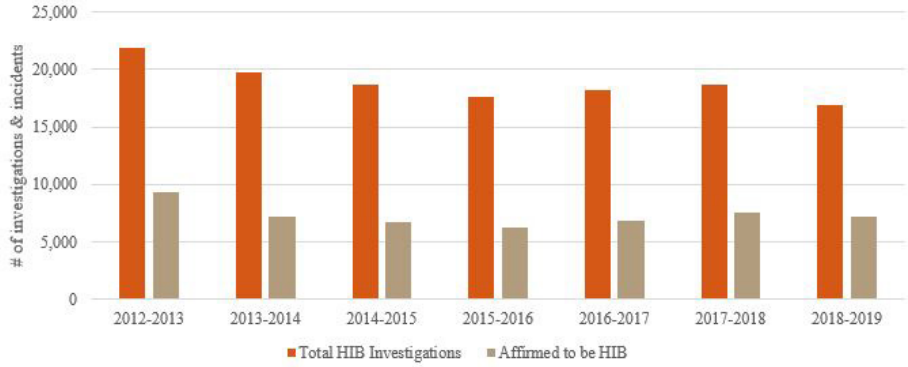
Source: https://www.nj.gov/education/schools/vandv/.

Note: Expulsion taken out due to small N sizes.

Behavioral Incidents in Schools

Incidents of Harassment, Intimidation, and Bullying (HIB) were commonly reported behaviors in New Jersey schools. As Figure 5.13 shows, the number of incidents that were investigated as HIB was consistently much higher than incidents that were affirmed as HIB. Measured by the nature of incidents, the vast majority of HIB incidents fell under the vague "other" category, while race, gender, sexual orientation, and disability made up the rest of the data points (Figure 5.14). There were slight fluctuations between gender and sexual orientation as the third most common nature of HIB incident, however race was consistently the second most common factor (behind other) and disability the least common. Overall, HIB incidents trended downwards between 2013-2019.

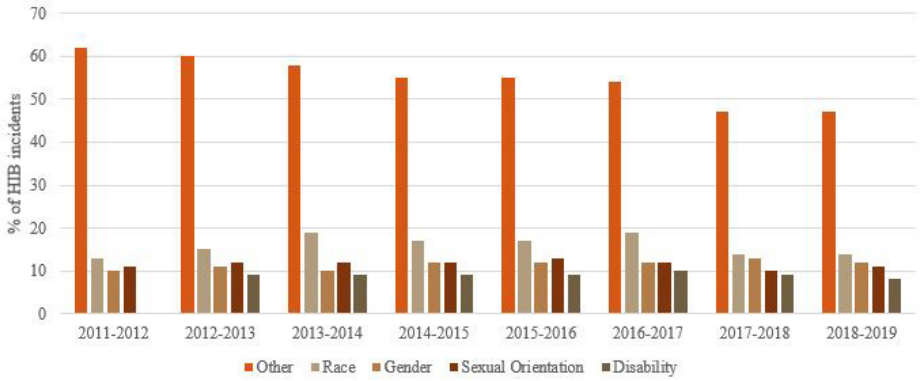
Figure 5.13: Harassment Intimidation and Bullying Investigations and Affirmed Incidents in Schools, New Jersey (2012–19)



Source: https://www.nj.gov/education/schools/vandv/.

Note: Incidents are unique counts across all districts. The NJDOE shifted to a new incidents data collection system, the Student Safety Data System (SSDS), beginning the 2017-2018 school year. Trends after 2017-2018 should not be compared to previous trends.

Figure 5.14: Harassment Intimidation and Bullying Incidents by Nature of Bullying, New Jersey (2011–19)

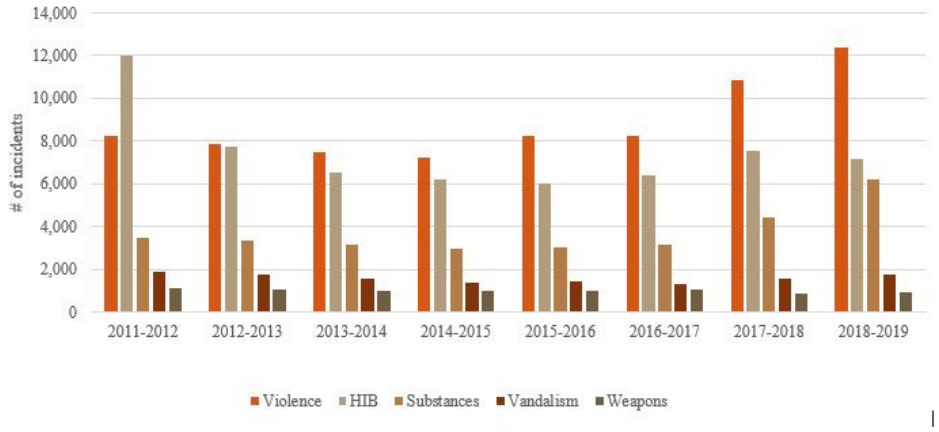


Source: https://www.nj.gov/education/schools/vandv/.

Note: Data on the nature of HIB incidents are collected under the following groupings in the Electronic Violence and Vandalism Reporting System (EVVRS): Protected Category; Effect of HIB Incident; and Mode of HIB Incident. Ancestry and Religion taken out due to small N sizes. Incidents are unique counts across all districts. The NJDOE shifted to a new incidents data collection system, the Student Safety Data System (SSDS), beginning the 2017-2018 school year. Trends after 2017-2018 should not be compared to previous trends.

Of the reported behavioral incidents in schools (Figure 5.15) violence was typically the most common incident, closely followed by HIB, although recent trends show incidents of violence increasing and widening the difference between the two factors. Incidents involving substances (including marijuana, but not exclusively) typically remained much lower than violence and HIB and much higher than vandalism and weapons. Incidents involving substances have trended upwards, with 3,482 reported incidents in 2012 and 6,234 in 2019. The percent of these behavioral incident categories which were reported to law enforcement are presented in Figure 5.16. Weapons remained relatively consistent near 70%, vandalism and substances near 40%, violence near 30%, and HIB near 10%.

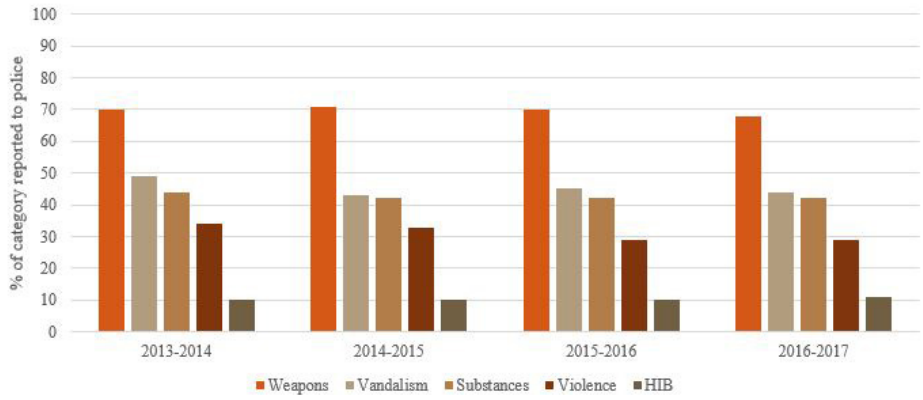
Figure 5.15: Reported Incidents in Schools by Category, New Jersey (2011–19)



Source: https://www.nj.gov/education/schools/vandv/.

Note: Incidents are unique counts across all districts. The NJDOE shifted to a new incidents data collection system, the Student Safety Data System (SSDS), beginning the 2017-2018 school year. Trends after 2017-2018 should not be compared to previous trends.

Figure 5.16: Incidents in Schools Reported to Police by Category, New Jersey (2013–17)

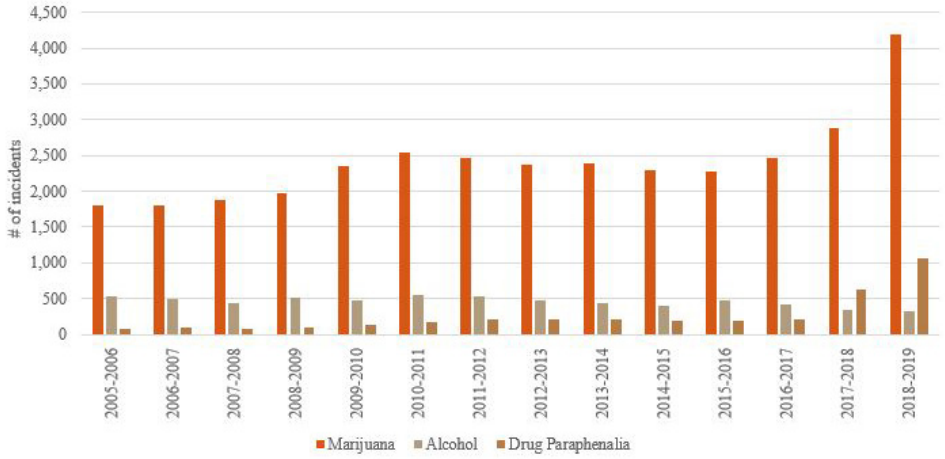


Source: https://www.nj.gov/education/schools/vandv/.

Note: Incidents are unique counts across all districts. The NJDOE shifted to a new incidents data collection system, the Student Safety Data System (SSDS), beginning the 2017-2018 school year. Trends after 2017-2018 should not be compared to previous trends.

Figure 5.17 looks specifically at substance abuse incidents in schools. Marijuana abuse was by far the most common incident, and incidents have generally been trending upwards in more recent years. The number of marijuana incidents in 2006 was 1,794 and by 2019 they increased to 4,189. The second and third most common incidents, though still well below marijuana, involved alcohol and drug paraphernalia. Alcohol has historically been more prevalent than drug paraphernalia, although the data from 2017-2019 shows a noticeable reversal of the two factors.

Figure 5.17: Incidents of Substance Abuse in Schools, New Jersey (2005–19)



Source: https://www.nj.gov/education/schools/vandv/.

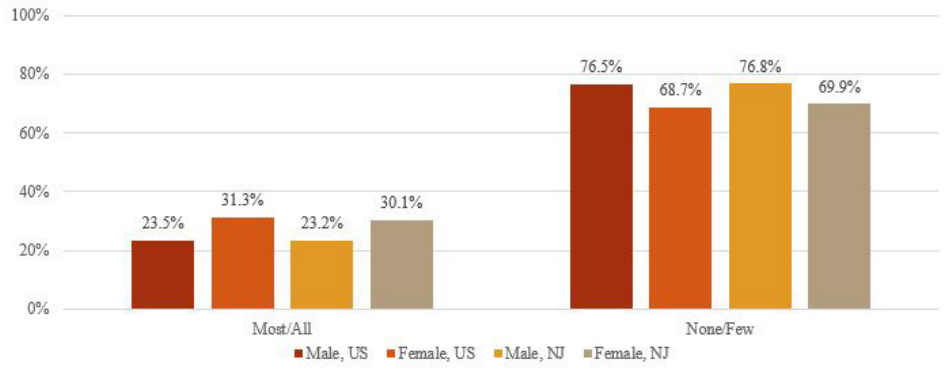
Note: Incidents are unique counts across all districts. The NJDOE shifted to a new incidents data collection system, the Student Safety Data System (SSDS), beginning the 2017-2018 school year. Trends after 2017-2018 should not be compared to previous trends.

National Survey on Drug Use and Health

The federal Substance Abuse and Mental Health Services Administration (SAMHSA) conducts the annual National Survey on Drug Use and Health (NSDUH). The NSDUH is the primary source of information on the prevalence, patterns, and consequences of alcohol, tobacco, illegal drug use and abuse, and mental disorders in the U.S. civilian, noninstitutionalized population, ages 12 and older.

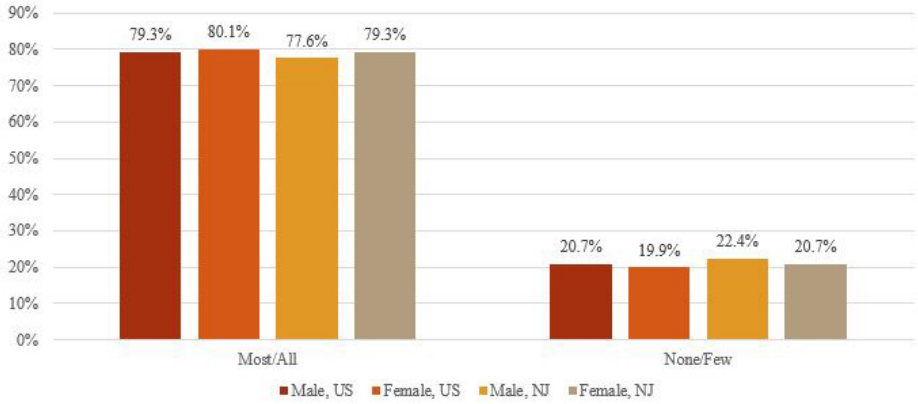
The following charts (Figures 5.18 and 5.19) provide a firsthand account and contrast of students' perception of marijuana use among New Jersey students and students in the U.S. as a whole. Perceptions of marijuana use among both male and female students in New Jersey and the U.S. were similar between 2010 and 2019. When asked how many students in their grade used marijuana/hashish, 23.2% of males in New Jersey perceived that most/all students used marijuana; nationally 23.5% of males thought most or all students used marijuana/hashish. Three in ten New Jersey females (30.5%) perceived that most/all students used marijuana or hashish; nationally 31.3% of female students believed that most or all females used the drug. In both New Jersey and the U.S., eight in ten male and female students believed that most or all students would try marijuana or hashish; two in ten thought that none or few of the students would not try it.

Figure 5.18: Students' Perceptions of Marijuana Use, by Gender. US and N.J, (2010-19)



Source: Substance Abuse and Mental Health Data Archive https://rdas.samhsa.gov/#/.

Figure 5.19: Students' Perceptions of Students who would try Marijuana by Gender, , US and NJ (2010-19)



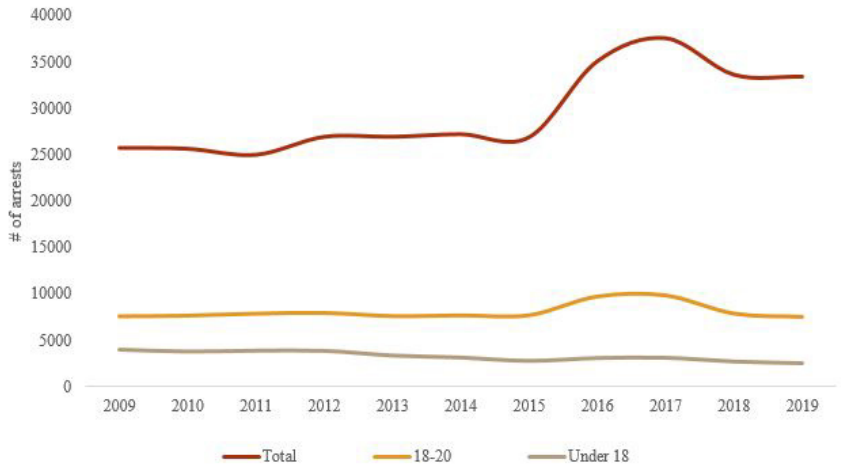
*How many of the students in your grade at school would you say try marijuana or hashish?

Source: Substance Abuse and Mental Health Data Archive https://rdas.samhsa.gov/#/.

Youth Criminal Legal System Involvement Related to Marijuana

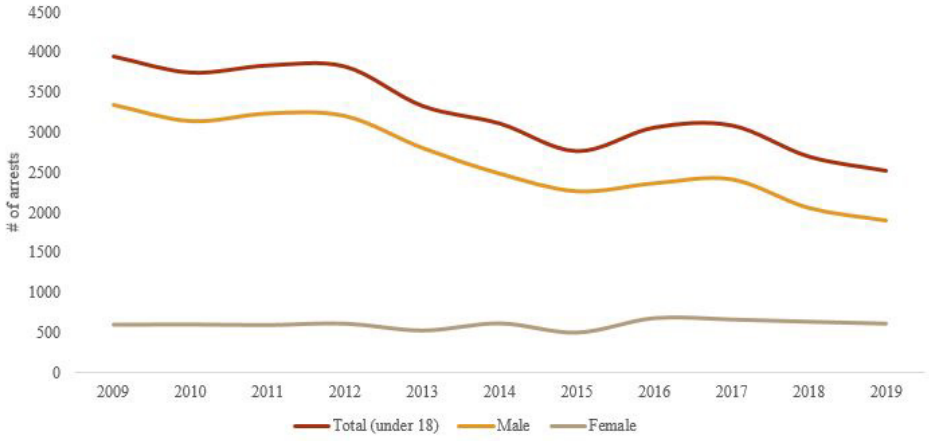
Between 2009-2019, juveniles arrested for marijuana offenses were a small percentage of the total number of marijuana arrests in New Jersey, as shown in Figure 5.20. The number of juveniles arrested for marijuana in New Jersey remained relatively consistent, while showing a gradual decrease of 36% between arrests in 2009 and 2019.As shown in Figure 5.21, the number of juvenile males arrested far surpassed females arrested for marijuana during this time period, although arrest numbers for both have been trending downwards. The number of juvenile females arrested averaged 605.9 per year, while the lowest number of males arrested was 1,898 in 2019 – compared to 3,346 in 2009, showing a 43% decrease. Figure 5.22 presents a similar gap between juveniles arrested for possession of marijuana and those arrested for sales/production of marijuana. The number of juveniles arrested for sales/production averaged 376.6 per year, while those arrested for possession averaged 2,885.7. Arrests of juveniles for possession decreased from 2009 to 2019, although they remained significantly higher than arrests for sales/production of marijuana through this time period.

Figure 5.20: Number Arrested for Marijuana Offenses by Age Group, New Jersey (2009–19)



Source: FBI Uniform Crime Reporting, https://crime-data-explorer.fr.cloud.gov/pages/explorer/crime/arrest.

Figure 5.21: Juveniles Arrested for Marijuana by Gender, New Jersey (2009–19)



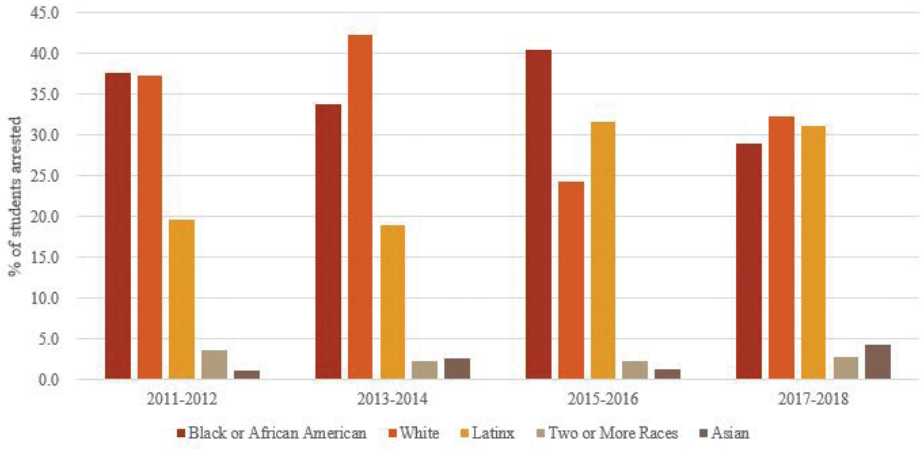
Source: FBI Uniform Crime Reporting https://crime-data-explorer.fr.cloud.gov/pages/explorer/crime/arrest.

Figure 5.22: Juveniles Arrested for Marijuana by Offense Type, New Jersey (2009–19)

Source: FBI Uniform Crime Reporting https://crime-data-explorer.fr.cloud.gov/pages/explorer/crime/arrest.

Figure 5.23 presents school-related arrests from which we can interpret trends in youth involvement with law enforcement. Between 2011 and 2018, arrest rates among black, white, and Latinx students remained consistently higher than arrest rates among Asian students and students of two or more races, which remained lower than 5%.

Figure 5.23: School-Related Arrests by Race/Ethnicity, New Jersey (2009–19)



Source: Civil Rights Data Collection https://ocrdata.ed.gov.

Note: American Indian, Alaska Native, Native Hawaiian & Other Pacific Islander were omitted due to a small N.

Summary

Overall, this chapter's section on criminal legal system involvement related to in-school incidents lacks marijuana-specific data. It would be useful for this study to know when marijuana is the key reason behind school and law enforcement data points such as youth arrests, behavioral incidents, and disciplinary actions. Substances and substance abuse are often a catch-all for these data points, in which marijuana is grouped with multiple other substances. Marijuana-specific data collected in schools and by law enforcement would help measure its impact on youth in New Jersey in a future study. This data would also be valuable at the county level in generating insight into geographic differences.

As indicated in chapter three, New Jersey is not a National Incident-Based Reporting System (NIBRS) compliant state, a crime-reporting system that allows for detailed crime-reporting. In compiling the data, this fact emerged as a missed opportunity for creating more comprehensive baseline trends and undoubtedly will affect future tracking of the role of marijuana in crime reports. The FBI has instituted (and now requires) this system of incident-based reporting, where all crimes in the incident are reported along with demographic information about the arrestee. This system's use by law enforcement agencies would allow marijuana-specific youth data to be more readily available in New Jersey.

Now that recreational marijuana use is legalized in New Jersey, a follow-up would help to understand how youth experiences related to school and marijuana use may be changing. In particular, it would be beneficial to know if youth are experiencing increased marijuana use in schools, and, if so, whether aspects of the school climate, discipline practices, and criminal legal system involvement as a result of schools' incidents have changed. This type of information can be ascertained by adding pertinent questions to the existing New Jersey youth surveys and working to boost survey response rates so that the data can be used in reporting. Data from surveys would provide greater first-hand information from youth. Finally, interviews with a sample of youth, teachers and school administrators would provide a greater insight into how young people are making decisions about marijuana use and school participation since the legalization of recreational marijuana.

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Chapter 6

Building a Framework to Assess Marijuana Use

Charles Menifield

Introduction

The main goal of this baseline study was to examine marijuana use data in New Jersey in the areas of public health, education, and public safety. Our findings clearly indicate that marijuana use in New Jersey is comparable to usage rates in the U.S. This includes states that have legalized recreational marijuana and those that have not legalized recreational usage. However, our analysis is very limited due to the type of data available and the various data collections methods used by different organizations to collect data. Hence, the main objective of this chapter is to make data and policy recommendations based on existing research and to recommend a framework that would be useful in creating policies to regulate the industry with respect to the areas investigated in this report.

The state and researchers should recognize that legalization of marijuana for recreational purposes may have negative or positive effects on public safety, public health, education and other outcomes. Legalization of marijuana, for instance, can positively contribute to racial justice by protecting communities of color from the disproportionate number of marijuana-related police stops and arrests and the collateral consequences that an arrest can trigger for education, employment, and family life. Also, research has shown that marijuana can provide relief to persons who suffer from inflammatory bowel disease (Kerlin et al. 2018) On the other hand, for example, excessive marijuana use can lead to poor cognitive functioning that can, in turn, negatively affect youth educational outcomes.[8]

The remainder of this chapter is split into two main sections. The first section is a summary of the type of data that would be useful in future studies. That is, what are the key quantitative variables that are needed to best assess the impact of recreational marijuana on New Jersey residents and what qualitative studies would be useful in aiding the state in its efforts to manage youth marijuana use as well as the ramifications of mitigating the effects of adult marijuana use.

Data Collection

While there is a variety of data available at the state and county levels, much of the data only provides us with a snapshot of marijuana use in New Jersey. In order to properly assess the impact of recreational marijuana use on the different races, age groups, geographical regions, urban areas, and so on, it is necessary to collect data, at minimum, at the county level. In addition, data collected from large cities and towns would also be quite useful in comparing and contrasting use among

8 https://www.healthaffairs.org/do/10.1377/hpb20210701.500845/full/

residents. The state should consider conducting a yearly random sample of New Jersey residents in order to get a first-hand impression of the impact of recreational marijuana on them and their school-aged children. Below is a summary of quantitative and qualitative data that would be useful to researchers and policy makers in better understanding the impact of recreational marijuana use.

1. *Quantitative Data*

In addition to the data currently available, we argue that the state should collect the data listed below for each county in the state on a yearly basis. This primary data are the first of two steps that will allow the state to create the necessary protocols and programs in order to reduce the potential negative outcomes associated with the usage of recreational marijuana, as well as diversion programs to protect our citizens. The data for the factors below should be collected by race, gender, and age groups at the county level. With respect to the educational data, we recommend that data for the type of high school should also be collected. The items in the lists below are not intended to be exhaustive. The state should consult professionals in each area for additional data points.

Public Safety

- Total Youth Marijuana Arrests
- Total Adult Marijuana Arrests
- Youth Marijuana Arrests for Possession
- Youth Marijuana Arrests for Sale
- Youth Misdemeanors for Marijuana Use or Possession
- Youth Traffic Accidents
- Adult Traffic Accidents
- Youth Traffic Accidents associated with Substance Abuse
- Adult Traffic Accidents associated with Substance Abuse
- Violent Crime Rates
- Non-Violent Crime Rates
- Driving Under the Influence
- Fines associated with Marijuana Use and Possession

Public Health

- Marijuana Dependence
- Cannabis Admissions to Health Facilities
- Substance Use Disorders
- Suicides
- Drug Overdoses
- Drug-related Deaths
- Number of Substance Abuse Treatment Facilities
- Percentage of the Population Suffering from Anxiety and Depression
- Cancer rates
- Obesity rates
- Cardiovascular Disease
- Percentage of the Population Suffering from Memory Loss
- Fetal Impact

Educational Data

- Comprehensive Data Associated with High School Dropout Numbers and Rates
- College Exam Admission Scores (race/ethnicity, age and gender)
- Suspensions by Incident
- In-School Suspensions
- Out-of-School Suspensions
- Bullying and Violent Behaviors
- Marijuana-related Behavioral Incidents in High Schools
- Marijuana Usage among Students and Interaction with Law Enforcement
- Marijuana Usage among Students and Interaction with the Judiciary

2. *Qualitative Research*

In addition to the quantitative data, we argue the state should sanction individual research projects that allow researchers to interview students, teachers, parents and school administrators with the goal of collecting first-hand accounts of the impact of marijuana use in the schools, medical settings, and public safety settings. These projects address questions such as:

Educational Institutions

- Do youth who use marijuana have difficulty thinking and problem solving?
- Do youth have problems with memory and learning?
- Do youth have problems with school and social life?
- Does marijuana use affect athletic performance?

Health Institutions

- Does secondhand smoke exposure increase risks to heart and lung health?
- What are the long-term implications of marijuana use on health?
- Has the number of persons seeking emergency room services increased due to marijuana use?
- Is there a relationship between marijuana and opioid use?

Public Safety

- Has marijuana use increased traffic accidents and fatalities?
- Are impaired drivers combining marijuana with other drugs?
- Are zero tolerance laws impacting the number of impaired drivers?
- Has the rate of violent and non-violent crime changed as a result of increased marijuana use?
- Have diversion programs been successful?

Once these types of data are collected, state officials should work with area specialists to develop programs and plans to address the issue. This could include changing the marketing and advertising processes associated with marijuana campaigns, creating diversion programs, increasing the number of mental health facilities, providing new training programs for police officers, and creating programs for families, educators, health officials and teachers.

Policy Recommendations

Fortunately for the state of New Jersey, over a dozen states have legalized recreational marijuana and there are many lessons that have been learned and captured in state reports and academic research. Below, we compile a list of items that warrant attention (best practices). We use a public health approach by Barry et al. (2018) as the foundation. In their article, they developed a "Public Health Protection Framework" with general policies (advisory committees, regulatory boards, and voluntary agreements), supply-side policies (market structure, prevention of sales to minors, restrictions on retail marijuana stores, dram shop liability, illicit trade, and unitary market) and demand-reduction policies (advertising and marketing, price and tax measures, prevention and control programs, monitoring and surveillance, smoke-free laws, local control, product regulations, packaging and labeling requirements). Rather than focus on each item in the framework, we will focus on sub-components of the framework that are relevant to the three main areas that we examined in our research.

- **Regulatory Agencies:** Research noted that most states with recreational marijuana laws created regulatory agencies that were charged with developing, implementing, and enforcing marijuana legislation. Many of these agencies mimicked alcohol control laws in designing their regulatory agencies.
- **Supply-Side Policies**: All of the states established a legal minimum age limit (21) to purchase marijuana and created a mechanism to "track-and-trace systems to monitor distribution and minimize illegal diversion" (p. 915).
- **Demand-Reduction Policies**: These policies emphasized and prohibited advertising and the marketing of marijuana in outlets where 30% or more of the audience was expected to be under the age of 21. This includes sports and other sponsorships.
- **Prevention and Control Programs**: "State regulators chose marijuana education programs that prioritize preventing and reducing youth use and educating adults on marijuana laws, safe storage practices, and responsible adult use, not broad demand reduction to protect public health" (Barry and Glantz 916, 2018). Some states also included information on health risks associated with marijuana use. This included: increased school dropouts, increased mental illness, addiction, negative effects on fetal or infant health, increased anxiety, increase risk of cancer, memory loss, risk to driving under the influence and so on (Wilkinson et al. 2016).
- **Packaging and Warning Labels**: Marijuana companies should include a THC warning symbol on marijuana products indicating that the product contained marijuana. Some states prohibited companies from using labels that were attractive to minors.

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The New Jersey State Policy Lab assists the State of New Jersey and its many communities in the design, implementation, and evaluation of state policies and programs by conducting rigorous evidence-based research that considers equity, efficiency, and efficacy of public policies and programs in holistic and innovative ways.

The lab leverages input from a robust network of multidisciplinary scholars, members of the community, and outside policy experts in New Jersey to craft innovative and equitable policy solutions that are sensitive to the needs of our state's diverse population.

By utilizing the combination of strong ties to New Jersey's diverse communities and significant expertise in collecting, cleaning, and analyzing data, the New Jersey State Policy Lab engages and collaborates with stakeholders such as community groups, the state government, and municipal governments to create high quality datasets and evidence that reflects our state's diversity and empowers state policy makers to address the needs of New Jersey communities more effectively, innovatively, and equitably.

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