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The Emerging Marijuana Retail Environment: Key Lessons Learned from Tobacco and Alcohol Retail Research

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Abstract

The emerging retail market for recreational marijuana use warrants research and surveillance as such markets are established in more US states. This research can be informed by the existing literature regarding tobacco and alcohol, which highlights the impact of spatial access to tobacco and alcohol retailers and exposure to tobacco and alcohol marketing on smoking and drinking among youth and young adults. Prior research indicates that tobacco and alcohol retailers, as well as medical marijuana dispensaries, are disproportionately located in neighborhoods characterized by socioeconomic disadvantage and by higher proportions of racial/ethnic minorities and young adults. Moreover, retail marketing or point-of-sale practices may differentially target subpopulations and differ by neighborhood demography and local policy. This literature and the methods employed for studying the tobacco and alcohol market could inform research on the retail environment for marijuana, as current gaps exist. In particular, much of the existing literature involves cross-sectional research designs; longitudinal studies are needed. Moreover, standardized measures are needed for systematic monitoring of industry marketing practices and to conduct research examining neighborhood differences in exposure to retail marketing for marijuana and its contribution to use modality and frequency, alone and in combination with nicotine and alcohol.

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Statement 2: Contributors

All authors contributed to the conceptualization of the paper and review of the literature. Dr. Berg led the writing of the manuscript. All authors contributed to and have approved the final manuscript.

Statement 3: Conflict of Interest

The authors declare that they have no conflicts of interest.

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The use of standardized measures for tobacco and alcohol marketing have been critical to develop an evidence base from cross-sectional and longitudinal studies that document the impact of retail marketing on substance use by adolescents and adults. Similar research is needed to establish an evidence base to inform federal, state, and local regulations of marijuana.

Keywords

Substance use; tobacco retail; alcohol retail; marijuana retail; marijuana use

1. Marijuana Use and Policy

Marijuana is the most commonly used federally illicit drug.¹ As of 2014, 22.2 million adults (8.4%) used marijuana in the past month, a 35% increase in current use since 2002.^{2,3} In 2016, California, Maine, Massachusetts, and Nevada voted to legalize recreational marijuana, following earlier policy changes in Alaska, Colorado, Oregon, Washington, and the District of Columbia. With 29 states having medical marijuana use and/or decriminalization laws and a majority of US adults favoring legalization,⁴ further legalization and decriminalization is anticipated despite controversy regarding the impact of such policies.⁵⁻¹¹

One concern is the impact of legalization and decriminalization on marijuana use prevalence; research has documented mixed findings,^{8,12-16} potentially attributable to differing research methods.¹⁷ Relatedly, there are concerns regarding the impact of marijuana use on health. Although marijuana may help manage a wide range of medical conditions and complications (e.g., chronic pain, nausea from chemotherapy, multiple sclerosis spasticity symptoms), its use is also linked to some adverse health outcomes (e.g., cardiovascular effects, respiratory/pulmonary effects), negative psychosocial outcomes (e.g., development of schizophrenia or depression), lower academic achievement,¹⁸ and increased risk for motor vehicle accidents.¹⁹⁻²¹ These risks raise concerns regarding legalizing recreational use, particularly if use is chronic or dependence develops.²² Indeed, long-term use can lead to addiction, particularly if use is initiated in adolescence.²³ Policies typically restricts how proximal retailers can be to youth-oriented facilities (e.g., schools, parks) and prohibit those under age of 21 on the premises (unless accessing medical marijuana).²⁴⁻²⁷ However, these restrictions do not typically extend to (or are monitored in) online environments.^{28,29}

An additional concern is the impact of marijuana on crime and arrests. Some research indicates no differences in property and violent crime rates comparing states where marijuana has been decriminalized or legalized to states where it has not³⁰ and that state medical marijuana legalization *may* be correlated with a reduction in homicide and assault rates.³¹ However, one study documented that, while densities of marijuana outlets were unrelated to property and violent crimes in local areas, the density of marijuana outlets in spatially adjacent areas was positively related to property crime and marijuana-specific crime over time.³² Despite controversy regarding marijuana legalization and

decriminalization and its impact, this evolving policy context, particularly recreational marijuana legalization, is conducive to rapid establishment of a new marijuana retail market.

2. Evolving Marijuana Retail Environment

Marijuana has become one of the fastest growing industries in the US. The legal market is projected to be worth \$22 billion by 2020.³³ After Colorado and Oregon legalized recreational use and retail, marijuana stores more than tripled in one year.³⁴ For example, in Colorado, which requires *separate licenses to sell medical and recreational marijuana*, the state has issued more than 3,000 total licenses (5.4 per 10,000 residents).³⁵ In Oregon, 1,340 recreational licenses have been approved (3.3 per 10,000 residents), and there are 470 active recreational retailer licenses.³⁶ These data indicate the rapid establishment of marijuana retail in states that have legalized recreational marijuana.

Within the context of this expanding market, marijuana products have diversified. Although marijuana is thought to be primarily smoked like cigarettes,³⁷ it can be used in multiple modes: smoking or inhaling it in joints, bowls, pipes, bongs, waterpipes, and blunts; vaporizing it; consumed in edible and drinkable products; and used as topicals (e.g., lotions, lip balms), among others. Some consumers believe that different products (e.g., herb, edibles, oil) yield different “highs” depending on variable levels of cannabinoid (CBD) and tetrahydrocannabinol (THC) and on whether the strain is an indica (e.g., physically sedating), sativa (e.g., mentally energizing), or a hybrid of the two.³⁸ In addition, legalization and variability in state and local marijuana policy³⁹ may impact marijuana use and modes of use.^{40,41} Thus, both retail availability and product variety are increasing, particularly in states where recreational marijuana has been legalized.

3. Lessons Learned From Tobacco and Alcohol Retail

The emerging retail market for recreational marijuana use warrants surveillance research to better understand how retailers position themselves in the marketplace as the marijuana market becomes more established. This work can be informed by the existing literature regarding licit drug retail, which highlights the impact of spatial access to tobacco and alcohol retailers and exposure to tobacco and alcohol marketing on smoking and drinking. Indeed, the literature suggests that there are common characteristics of neighborhoods where these retailers are concentrated and that retail marketing strategies vary by these contextual factors.

3.1. Spatial Access to Retailers

The literature regarding tobacco and alcohol retail indicates that physical availability of retailers is associated with increased use of the respective substances.^{42–52} Physical availability of retailers reduces search costs to obtain tobacco and alcohol, increases exposure to environmental cues that promote use, and deters quit attempts.^{42–53} Specific to marijuana, prior research has documented that greater density of medical marijuana dispensaries in 50 midsize California cities was associated with higher odds of past-month use and greater frequency of use among adults.⁵⁴ In addition, among US adults who tried marijuana at least once, living in a state with a higher density of marijuana dispensaries was

associated with higher odds of using marijuana in alternative forms (e.g., vaping, edibles).⁵⁵ Another recent study documented that neighborhoods having medical marijuana dispensaries had a 6.8% increase in the number of marijuana hospitalizations with a marijuana abuse/dependence code.⁵⁶ This research suggests that exposure to marijuana retail within one's physical environment may be associated with increased use and potentially dependence.

Prior research indicates that medical marijuana dispensaries are concentrated in neighborhoods with higher rates of poverty⁵⁷ and greater proportions of racial/ethnic minorities^{58,59} and young people.⁶⁰ These findings mirror the literature regarding tobacco and alcohol retailer density, indicating disproportionate retail availability in neighborhoods of these vulnerable populations.^{43,45,53,61–67} Even though alcohol retailers are also proximal to higher SES neighborhoods with high demand for alcohol, the neighborhoods in which they are located (i.e., those with higher minority population and lower SES) experience the negative localized impacts of the outlets (e.g., crime).^{42,65,68–70} Recent research has also documented that both medical and recreational marijuana retailers in Colorado were more likely to locate in neighborhoods that had a lower proportion of young people, had a higher proportion of racial and ethnic minority population, had a lower household income, had a higher crime rate, or had a greater density of on-premise alcohol outlets.⁶⁰

These disparities in retailer location and density may be the result of several factors. Reasons may include intentional targeting of these populations, retailers concentrating in areas of potentially higher demand, or higher income neighborhoods involving greater overhead costs. In relation to marijuana, an additional reason may be that certain jurisdictions (e.g., more affluent jurisdictions, rural areas) may be more inclined to have local policies that ban marijuana retail.

3.2. Marketing Strategies and Influence

Product availability, promotion, placement, and price have been used to characterize the retail marketplace for tobacco and alcohol and to study systematic differences in marketing by neighborhood demography.^{71,72} The tobacco literature indicates that marketing plays a pivotal role in attracting new users,^{73–80} promoting continued use,^{73,81,82} building brand loyalty,⁷⁶ and shaping consumer perceptions about products, particularly for new or novel products.⁸³ Indeed, a growing percent of marijuana sales are from newer marijuana products, such as edibles, concentrates, and topicals (e.g., lotions),^{84,85} which likely reflects the marketing efforts promoting these newer products.⁸⁶

Exposure to retail marketing has been shown to impact substance use. For example, one systematic review documented statistically significant associations between exposure to retail tobacco marketing and smoking initiation or susceptibility to smoking among children, increased impulse purchasing among adult smokers, and increased urges to start smoking after seeing tobacco displayed among ex-smokers. The literature also indicates an association between alcohol marketing, including retail marketing, and alcohol use, particularly among young people.^{87–90} Emerging research also suggests that exposure to marijuana marketing influences marijuana use among young people.^{29,91} Collectively, this

research supports the scientific premise that exposure to retail marketing for marijuana will influence its use.

3.3. Place Characteristics and Retail Marketing

Marketing efforts (product offerings, promotions, pricing) are critical factors related to consumer product uptake,⁹² with implications for regulation. For example, in terms of product offerings, the tobacco industry has appealed to youth through the use of flavors or imagery (e.g., Joe Camel) that appeal to youth; similarly, marijuana products have also been found in forms (e.g., gummies), flavors (e.g., candy), and packaging (e.g., bright colors, cartoon drawings) that appeal to youth. Regulatory efforts have worked to address these concerns within the tobacco market^{93,94} and have more recently made efforts to also address these concerns in the marijuana market.^{27,35,95,96} Unfortunately, there has been increases in marijuana poisonings in young children in states that have legalized medicinal marijuana;^{97,98} this is a challenge not similarly seen in the context of tobacco and alcohol.

An important concern is that marketing and sales practices for tobacco and alcohol differ by neighborhood characteristics.^{64,99} For example, regarding promotions, stores in low-income neighborhoods, stores in neighborhoods with a higher proportion of Black residents, and stores near schools have the highest prevalence of cigarette promotions and ads.^{100–105} Additionally, cigarette and cigar pricing also differs across neighborhood contexts.¹⁰⁶ In large samples of tobacco retailers in California and the US, popular premium-brand cigarettes and the cheapest pack (regardless of brand) cost less in neighborhoods with high proportion of school-age youth, young adults, and Blacks.¹⁰⁷ Alcohol marketing shows similar patterns.^{99,108} For instance, in a representative sample of alcohol retailers in 329 US communities, retail marketing for alcohol was particularly extensive in certain stores frequented by teenagers and young adults.¹⁰⁸ In relation to marijuana marketing, recent research documented that, in Los Angeles, at the retailer level, consumers were more likely to purchase edibles from dispensaries located within census tracts with higher median incomes or proximal to a higher number of dispensaries.¹⁰⁹ This literature suggests that retail marketing for marijuana may also be impacted by characteristics of the retailer's neighborhood.

4. Summary and Future Directions

Collectively, this literature suggests that spatial access to tobacco and alcohol retailers and exposure to the widespread marketing these sites contain may contribute to substance use and disparities in patterns of use. Indeed, these licit drug retailers are disproportionately located in neighborhoods characterized by socioeconomic disadvantage and higher proportions of racial/ethnic minorities, and that retail marketing differs by neighborhood demography. This literature and the methods employed for studying the tobacco and alcohol market could inform the gaps in research on the retail environment for marijuana.

First, research is needed to examine where marijuana retailers locate and how they market their products, as well as the impact of spatial access and marketing exposure on marijuana use. In particular, longitudinal examinations are needed to examine activity over time and to establish whether there are causal relationships.¹¹⁰ Another limitation to the existing

literature regarding the marijuana retail environment is that it has focused on large geographies defined by administrative units (e.g., states, cities), which may underestimate its impact on individual substance use, mode, and motives.^{111,112} Moreover, few studies³⁹ have accounted for the nuanced local policies regulating marijuana retail, which is critical given that both state and local policies may regulate the number, type, and location of marijuana dispensaries/retailers.

Second, research on marijuana marketing has focused almost entirely on social media and other online marketing.^{28,91} For example, prior research has documented that online vendors neglect age restrictions and make health claims.¹¹³ However, retail surveillance is also needed to comprehensively understand marijuana retailer marketing strategies. The emerging retail environment for marijuana lacks standardized measures that are needed for systematic monitoring of industry marketing practices and to conduct research examining the impact of retail marketing on use. Such measures for tobacco and alcohol have allowed research to document the impact of such marketing on use by adolescents and adults; these findings have helped inform federal, state, and local regulations. Drawing from assessments of medical marijuana dispensaries¹¹⁴ and tobacco retailers,¹¹⁵ our team developed the Marijuana Retail Surveillance Tool (MRST), which assesses product availability, promotion, and price, as well as sociocontextual features of retailers (e.g., proximity to other businesses). We used the MRST to conduct studies in convenience samples of 20 Denver retailers in September 2016⁸⁶ and 25 Seattle retailers in July 2017.¹¹⁶ Results indicated great variability in product offering, particularly novel products (e.g., edibles). Interior ads (particularly for novel products), social media promotions, and health-related claims were prevalent. Price discounts (e.g., daily deals, early bird specials, loyalty programs) were also common. There were indications of attempts to circumvent policies (e.g., promotions for “private” parties where social use was legal) and noncompliance to package and labeling requirements in both cities.¹¹⁷ Our Seattle pilot involved two independent coders and documented high inter-rater reliability across items (i.e., kappa=.76 to 1.0). These initial steps toward surveillance measures need to be expanded upon in order to systematically monitor the marijuana retail environment.

In summary, an evidence base regarding the marijuana retail environment and its impact on use is needed to inform state and local policy and enforcement, which has been endorsed in the literature.¹¹⁸ This line of work can be informed by the literature and the methods employed for studying the tobacco and alcohol market.

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Highlights

- The relatively new marijuana retail market warrants research and surveillance.
- The literature regarding tobacco and alcohol retail can inform this work.
- Tobacco and alcohol retailer location and marketing may impact substance use.
- These retailers may differentially target vulnerable populations.
- Gaps in the literature need to be addressed in order to inform research and policy.