

Associations Between the Retail Marijuana Environment and Youth Sources of Cannabis in 40 California Cities

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OBJECTIVE

To investigate youth sources of cannabis and their associations with local retail marijuana environments in 40 California cities

METHODS

- Survey data
 - 1,082 15-to-20-year-olds in 40 California cities in 2023-2024
 - Past-year cannabis users reported frequency of obtaining cannabis from each of seven sources:
 1. retail cannabis store
 2. home delivery service
 3. dealer
 4. someone they know who is 21 or older
 5. someone they know who is under 21
 6. home with their parents' permission
 7. home without their parents' permission
- Local retail environment
 - Licensed cannabis storefront retailers (California DCC)
 - Unlicensed cannabis storefront retailers (Google, Yelp searches)
 - Licensed cannabis delivery services (Weedmaps)
- Multilevel logistic regression models
 - Participants reporting past-year cannabis use (n=400)
 - City of residence treated as random effect
 - Dependent measures: having acquired marijuana from each source in the past year (yes, no)
 - Predictors:
 - densities of licensed and unlicensed cannabis storefront retailers
 - numbers of licensed delivery services
 - city- and participant-level sociodemographic characteristics

RESULTS

- Licensed cannabis storefront density was positively associated with obtaining marijuana from:
 - home delivery service (OR = 1.19, p = 0.021)
 - dealer (OR = 1.15, p = 0.035)
- No other local retail environment measures were significantly associated with youth cannabis sources
- Obtaining cannabis from a retail store was positively associated with:
 - city-level socioeconomic status (OR = 1.71, p = 0.047)
 - age (OR = 1.38, p = 0.007)
 - being male at birth (OR = 2.38, p = 0.001)
- Age was positively associated with obtaining cannabis from
 - someone 21 or older (OR = 1.48, p < 0.001)
 - home with parents' permission (OR = 1.42, p = 0.011)
- Age was negatively associated with obtaining marijuana from someone under 21 (OR = 0.75, p = 0.014)
- None of the predictors were significantly associated with obtaining marijuana from home without the parents' permission

California youth aged 15-20 are more likely to obtain cannabis from a home delivery service or a dealer if they live in a city with more licensed dispensaries per square mile

CONFLICT OF INTEREST: None.
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Figure 1. Youth Cannabis Sources

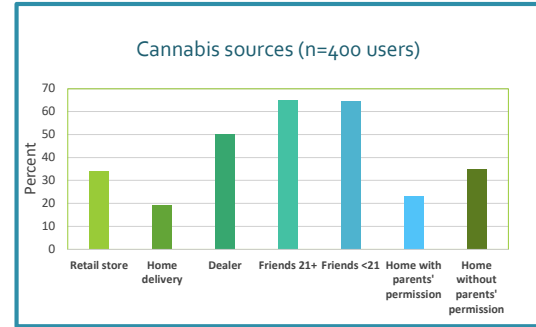


Table 1. Associations Between Retail Availability and Cannabis Sources, Odds Ratios

Source	Licensed storefront density		Unlicensed storefront density		Number of delivery services	
	OR	95% CI	OR	95% CI	OR	95% CI
Retail store	1.0	0.88, 1.2	0.67	0.33, 1.4	0.98	0.95, 1.0
Home delivery	1.2*	1.0, 1.4	1.2	0.54, 2.5	1.0	1.0, 1.1
Dealer	1.1*	1.0, 1.3	0.73	0.40, 1.3	1.0	0.98, 1.0
Friends 21+	1.1	0.96, 1.3	0.95	0.5, 1.8	1.0	0.97, 1.0
Friends <21	0.97	0.85, 1.1	0.65	0.35, 1.2	1.0	0.97, 1.0
Home with parents' permission	1.1	0.95, 1.3	0.66	0.29, 1.5	0.98	0.94, 1.0
Home without parents' permission	1.1	0.94, 1.3	1.1	0.58, 2.2	1.0	0.98, 1.0

* p<0.05

Models controlled for population density; percent Latinx, Black, White, Asian, and Multiracial; Socioeconomic Factor Score; participant age, sex at birth, Hispanic identification, racial identification, and weekly spending money.

KEY FINDINGS

- Youth aged 15-to-20 primarily obtain cannabis through someone they know around their age
- Density of licensed cannabis retailers may be related to youth obtaining cannabis from a home delivery service or from a dealer

DISCUSSION AND IMPLICATIONS

- Associations with retail outlet density may be due to community values/norms
- Future research:
 - Qualitative study on sources and norms
 - Exploring other retail environment measures (e.g., proximities)
- Implications for prevention:
 - Local restrictions on retail outlet density, locations
 - Better enforcement of ID checking for delivery services