Pregnant and recently pregnant people's views on policies that punish pregnant people who use cannabis.

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**Word Count: 3,449**

Funding: This research was supported by a grant from the California Department of Cannabis Control (grant No. 65328). The funders had no role in the design and conduct of the study; collection, management, analysis, and interpretation of the data; preparation, review, or approval of the manuscript; or decision to submit the work for publication.

Author Contributions: MAB: Input on overall study design, conducted all analyses, and wrote first draft of the manuscript. SR: Input on overall study design, input on data analysis and data interpretation. CZ: Project administration, survey design, obtained human subjects approval, and data cleaning. SCMR: Conceptualization, study and survey design, obtained funding, input on data analysis, data interpretation and wrote sections of the manuscript. All authors reviewed, edited, and approved the final manuscript.

Conflicts of interest: All authors report no financial or personal conflicts of interest that could inappropriately influence their work.

Acknowledgments: The authors are grateful to members of our community advisory board for their support reviewing survey items and interpreting findings.

Decaration of generative AI use: AI was not used in the writing of this manuscript.

Public use data statement: De-identified data about cannabis related beliefs are available to qualified researchers interested in conducting additional analyses. Data about cannabis use behavior is not available to other researchers. This is because there is significant stigma and punishment experienced by pregnant people who use cannabis, and a breach in confidentiality for study participants could have severe consequences.

Keywords: cannabis use; pregnancy; health policy; hospital policy

## Highlights

- More people supported cannabis being illegal for pregnant people than for everyone
- 30% of participants considered cannabis use during pregnancy a form of child abuse
- Most people supported practices that protect the patient-provider relationship
- Cannabis use and safety beliefs were associated with support for punitive policies

## Abstract

***Objective:*** To assess recently or currently pregnant people's views about policies and practices that punish pregnant people who use cannabis.
***Methods:*** A market research firm administered a survey (May-June 2022) to pregnant and recently pregnant people ages 18-49 regarding their attitudes about policies and practices that punish cannabis use. We estimated weighted proportions and conducted multivariable regression analyses to assess whether cannabis use and beliefs are associated with support for punishing people who use cannabis.
***Results:*** 3,571 people initiated the survey, 3,569 completed support for punishment items. More participants (32%) agreed that cannabis use should be illegal for pregnant people than for everyone (17%); 30% agreed that using cannabis during pregnancy is child abuse. Most participants agreed that pregnant people should be able to talk with their doctor about cannabis use without worrying about getting in trouble (72%) and that doctors and nurses should get consent from the pregnant person before testing their urine for cannabis (52%), although uncertainty was high (22%-39%) across items. Cannabis use pre-pregnancy (-0.39, 95% CI, -0.46,-.32) and during pregnancy (-0.42, 95% CI, -0.49,-0.35) was associated with less support for punishment. Agreeing that use during pregnancy is safe for the baby (-0.47, 95% CI, -0.58,-0.36) and that people who use cannabis during pregnancy can be great parents (-0.55, 95% CI -0.63,-0.46) were associated with less support for punishment.
***Conclusions:*** Most pregnant people support policies and practices that protect the patient-provider relationship. Views about cannabis use safety and parenting were associated with support for punishment.

## 1. Introduction

In the U.S., cannabis is one of the most commonly used substances, including among pregnant people [1,2]. Most people who use cannabis during pregnancy used cannabis before they became pregnant, with many continuing use during their pregnancy to manage pregnancy and mental health symptoms, often because pregnant people perceive cannabis to be safer than other medications during pregnancy [1–8]. The American College for Obstetricians and Gynecologists (ACOG) and the Centers for Disease Control and Prevention (CDC) discourage using cannabis during pregnancy and warn that it can harm the developing pregnancy and cause pregnancy complications [9,10]. ACOG also recommends that health care providers discuss cannabis use with their patients, provide counselling about the health risks of using cannabis during pregnancy, and encourage patients to discontinue cannabis use during pregnancy, while also reminding providers that care should not result in punitive consequences such as involuntary commitment or family separation [9]. However, research suggests that health care providers often lack awareness and training about cannabis use during pregnancy and often do not discuss it with patients [11]. Patients similarly report that providers rarely initiate discussions about cannabis use in pregnancy and that they are reluctant to disclose their cannabis use due to fears of being judged, reported to child protective services, or of experiencing other punitive consequences [7,12–16].

While a growing number of U.S. states have legalized recreational cannabis [17], some state- and institutional-level policies (e.g., at hospitals and other healthcare facilities) compromise clinicians' ability to maintain patient trust, confidentiality and privacy and to protect their patients' from punitive consequences, as recommended by leading medical and public health organizations [18–21]. More than half of U.S. states have policies that define drug use during pregnancy as child abuse and mandate reporting people who use during pregnancy to child welfare or other government agencies [18]. Despite the lack of clinical indications for testing people's urine for drugs, some policies and practices include non-consensual drug testing and reporting positive test results to child welfare agencies [22,23]. In some

states, such reporting polices have resulted in criminal prosecution and incarceration of pregnant people [24]. Most research suggests that such punitive policies and practices do not improve perinatal health outcomes, but instead they reinforce stigma and lead people to avoid and disengage from prenatal care out of fear of being reported to government authorities, having their children removed, or being prosecuted [25–27]. Importantly, all of these forms of punishment tend to be discriminatory, disproportionately targeting people of color and people living on low incomes, further exacerbating social inequities [24,28–33].

Recognizing how such policies and practices widen health disparities and impede the provision of compassionate high-quality health care for pregnant people, there has been movement towards improving policies and practices related to drug testing during pregnancy. For example, clinicians and advocates have begun to consider eliminating non-consensual drug testing practices, removing cannabis from urine drug testing panels, and changing child welfare reporting requirements [33,34]. However, despite such efforts to improve policies and practices related to reporting and surveilling of pregnant people, limited research exists regarding the general public's views about policies and practices related to cannabis use. Most existing research focuses on health care provider views about policies and practices related to drug use in general [35–37]. This research finds that health care providers tend to not support reporting pregnant people's cannabis use to child welfare, are aware of the negative consequences of reporting pregnant and birthing people's drug use to child welfare, yet also describe concerns about the potential harms to infants if they do not report drug use [35–37].

A notable gap in this body of research includes a lack of understanding of how pregnant people view policies and practices that focus on criminalizing, reporting, and surveilling people's use of cannabis during pregnancy. In this paper, we seek to describe attitudes towards policies that criminalize, report, or surveil people who use cannabis and whether levels of support differ by pregnant people's own cannabis use behaviors as well as their beliefs about cannabis use during pregnancy among an adult sample of

currently pregnant or recently pregnant people. We specifically explored the role of beliefs about the safety of cannabis use during pregnancy, beliefs about whether people who use cannabis during pregnancy can be good parents, and experiences using cannabis before and during pregnancy.

## 2. Methods

### 2.1 Study design

Ipsos, a market research organization, administered a cross-sectional online survey from May through June 2022 of currently and recently pregnant people to members of its web-based probability panel, and to reach sufficient numbers of pregnant and recently pregnant people, also to non-probability panels. Eligibility criteria included being ages 18 – 49, currently or recently pregnant within the past two years and living in one of the 36 study states and Washington DC (total 37). Recreational cannabis was legal in 20 of the study states at the time of data collection (Alaska, Arizona, California, Colorado, Connecticut, DC, Illinois, Maine, Massachusetts, Michigan, Montana, Nevada, New Jersey, New Mexico, New York, Oregon, Rhode Island, Vermont, Virginia, Washington[20,21]). In the remaining 17 states, recreational cannabis use was not legal (Delaware, Hawaii, Idaho, Indiana, Iowa, Maryland, Minnesota, Missouri, New Hampshire, North Dakota, North Carolina, Ohio, Pennsylvania, South Dakota, Utah, Wisconsin, Wyoming). A total of 6,163 people (or 51.2%) of 12,045 probability panel members invited to participate completed the eligibility screener, of which 747 (12.1%) were eligible and initiated the survey. For non-probability panels, 8,302 completed the eligibility screener, of which 2,824 (34.0%) were eligible and initiated the survey. We piloted the survey with 12 participants to test survey functionality and length. All potentially eligible panel members were invited to participate in a survey about people's perspectives on cannabis use during pregnancy. People who were eligible and interested provided electronic consent. Up to two automatic reminders were sent to non-responders on day 3 and 6 following the initial survey invitation. Participants were reimbursed through Ipsos' loyalty incentive program reflecting their level of

participation. For households provided with internet hardware and services, their panel loyalty incentive is the hardware and service. The University of California, San Francisco (UCSF) Institutional Review Board (IRB) approved this study. We followed the Strengthening the Reporting of Observational Studies in Epidemiology (STROBE) guidelines for cross-sectional studies.

## 2.2 Item development

To develop items, we drew from the literature, our study team's knowledge of current policy and health care practices related to pregnant people's cannabis use, and discussions of items with our community advisory board members. We also obtained feedback on items from health care providers who care for pregnant people who use drugs and obtained and incorporated multiple rounds of feedback from our community advisory board. We revised items iteratively until finalizing our survey items.

## 2.3 Outcome variables

2.3.1. Support for punishment was our primary outcome and includes ten items related to criminalizing, reporting, and surveilling pregnant people who use cannabis (Figure 1). We asked people about their "opinions about possible consequences for using cannabis" and "how much do you agree or disagree" with ten statements related to the criminalization, reporting, and surveillance of people who use cannabis during pregnancy. Respondents indicated their level of agreement with each item on a five-point Likert scale: "strongly agree", "agree", "neither agree nor disagree", "disagree", "strongly disagree", which we coded from -2 to +2, with positive values indicating support for punishment (criminalizing, reporting, and surveilling), after reverse coding four items. We coded "neither agree nor disagree" as "unsure" with a value of zero. For each item, we also created 3-part categorical variables for ease of interpretation, where "strongly agree" and "agree" were collapsed as "agree", "strongly disagree" and "disagree" collapsed as "disagree", and "neither agree or disagree" as "unsure". We also created a continuous support for

punishment scale by calculating the mean of all ten items (Cronbach's alpha=0.93, ranging from −2 to 2) with higher scores indicating more support for punishment.

### 2.4 Exposure variables and covariates

Our two exposures of interest were cannabis use beliefs and cannabis use during pregnancy. For cannabis use beliefs, people indicated their level of endorsement ("strongly agree", "agree", "neither agree nor disagree", "disagree", "strongly disagree") to two statements: "People who use cannabis during pregnancy can be great parents" and "Using cannabis during pregnancy is safe for the baby". For both items, we collapsed responses to create 3-part categorical variables. To measure cannabis use during pregnancy we created a 3-part categorical variable (no cannabis use before or during pregnancy, cannabis use in the 12 months before but not during the current or recent pregnancy, and cannabis during current or recent pregnancy). Those who reported not using cannabis in the 12 months prior to or during their current or most recent pregnancy were coded as "no cannabis use". We coded those who answered "not sure" about whether they used cannabis during pregnancy (n=29) as having used cannabis during pregnancy. We selected model covariates *a priori*, including respondent sociodemographic characteristics and pregnancy experiences. These included sociodemographic (age, race, ethnicity, language proficiency, educational attainment, household income and gender identity/sexual orientation) and pregnancy (pregnancy outcome, and gravidity) characteristics.

### 2.5 Statistical analyses

For all analyses, we used weights generated by Ipsos designed to produce estimates representative of the non-institutionalized U.S. population, based on U.S. Census data, and adjusted to account for any differential nonresponse. We estimated weighted proportions and 95% confidence intervals (CI). We also conducted four mixed effects multivariable regression analyses, with a random effect for state. Regression analyses assessed whether cannabis safety beliefs are associated with support for

criminalizing, reporting, and surveilling people who use cannabis and included a full model and models stratified by cannabis use during pregnancy (none, use before but not during pregnancy, and cannabis use during pregnancy). We conducted post-estimation tests to estimate the predicted adjusted mean level of support for policies that criminalize, report, and surveil people who use cannabis by cannabis use and beliefs. We conducted all analyses in STATA 17 and report statistical significance at $p \leq 0.05$. In all analyses we excluded any cases where data was missing on half or more of the support for criminalizing, reporting, and surveilling items. In regression analyses, we employed casewise deletion methods since the rate of missing covariate data was low at less than 1%.

## 3. Results

Among the 3,571 who initiated the survey, 2 were excluded because they completed less than half of our primary outcome measure, leaving a final analytic sample of 3,569. Participants weighted mean age was 31.7 [31.4,32.1] years, 58% identified as non-Hispanic white and 11% as non-Hispanic Black; 22% were pregnant at the time they completed the survey and 71% had recently given birth (Table 1). Two-thirds (66%) of respondents reported no cannabis use and less than one in five reported cannabis use during (17%) or prior to their most recent pregnancy (17%). Approximately 12% agreed that using cannabis during pregnancy was safe and nearly half (48%) agreed that people who use cannabis during pregnancy can be great parents.

People were much less likely to agree that "cannabis use should be illegal for everyone" (17%) than to agree that "cannabis use should be illegal for pregnant people" (32%), which received a similar level of endorsement as "using cannabis during pregnancy is child abuse" (30%) (Figure 1). Endorsement of items related to leaving pregnant people alone varied by government agency. Slightly more people agreed that police officers should leave pregnant people alone (33%), than agreeing that CPS (30%) and health departments (26%) should leave pregnant people alone, although only 22% agreed that "pregnant

people who use cannabis should be reported to CPS." Items related to privacy and consensual drug testing when interacting with health care providers had the highest levels of endorsement, i.e. almost three-fourths agreed that "pregnant people should be able to ask to their doctor about cannabis use without worrying about getting into trouble" (72%) and more than half agreed that "doctors and nurses should get consent from the pregnant person before testing their urine for cannabis" (52%), although 43% disagreed that "doctors and nurses should not test pregnant people's urine for cannabis" (Figure 1). Uncertainty (i.e., neither agree or disagree) about each statement was high ranging from 22% for "cannabis use should be illegal for everyone" to 39% for "using cannabis during pregnancy is child abuse".

According to adjusted analyses (Table 2), people who agreed that cannabis use during pregnancy is safe for the baby (-0.47, 95% CI,-0.58,-0.36) and that people who use cannabis during pregnancy can be great parents (-0.55, 95% CI -0.63,-0.46) were significantly less likely to support punishment. Similarly, in models stratified by whether people had used cannabis during pregnancy (no cannabis use before or during current/recent pregnancy, cannabis use in the 12 months before but not during the current/recent pregnancy, and cannabis during current/recent pregnancy), people who agreed that people who use cannabis during pregnancy can be great parents were significantly less likely to support punishment [(-0.43, 95% CI -0.50,-0.35), (-0.60,95% CI -0.78,-0.42), and -0.57,95% CI-0.68,-0.45), respectively]. Among those who reported no cannabis use or use during pregnancy, agreeing that cannabis use during pregnancy is safe for the baby was significantly associated with less support for punishment (-0.67, 95% CI, -0.86,-0.47 and -0.21, 95% CI -0.26,-0.16, respectively).

Adjusted mean levels of support for punishment by cannabis use beliefs and use are presented in Figure 2. As indicated by the negative overall mean level of support for punishment (-0.21, 95% CI, -0.25, -0.17), people were less supportive of punishment overall. Highest mean levels of support for punishment were among those who disagreed that people who use cannabis during pregnancy can be great parents (0.40, 95% CI 0.32,0.48) and among those who disagreed that use during pregnancy is safe for the baby

(0.00, 95% CI -0.06,0.07). When examining mean levels of support for punishment by cannabis use, those who used cannabis during a recent or current pregnancy (-0.42, 95% CI -0.49, -0.36) or pre-pregnancy (-0.39, 95% CI -0.46,-0.32) had the lowest levels of support for punishment.

## 4. Discussion

Findings from this study of recently and currently pregnant people living across the U.S. indicate that people's views about cannabis use policies are complex and vary by policy, the actors involved in policy enforcement, and the extent to which people's privacy and bodily autonomy are compromised. While a minority--less than one in five-- support making cannabis illegal for everyone, a larger proportion--one-third—support it being illegal for pregnant people, possibly due to safety concerns. While nearly half indicated support for doctors and nurses to test pregnant people's urine, over half agreed that testing should be consensual and that pregnant people who use cannabis should be able to interact with health care providers without fear of getting in trouble. However, there was also a large proportion--about half-- who disagreed or were unsure whether health care providers should obtain consent before testing pregnant people's urine for drugs. The lack of support for non-consensual drug testing are consistent with qualitative interviews with pregnant people who use cannabis during pregnancy where they preferred healthcare messages that promoted autonomous decision-making over those that reinforced stigma [under review]. The high levels of support for urine drug testing, contrasts with the proportion endorsing the idea that pregnant people should be able to communicate with their health care provider about their cannabis use without worrying about getting in trouble. This finding suggests that people may not necessarily see the policy connection between a healthcare provider knowing about someone's cannabis use, either via patient disclosure or drug test, and the possible punitive consequences of health care providers having and then disclosing this information.

Importantly, we found low levels of support for reporting people to child protective services (CPS) or child welfare/police surveillance, which was endorsed by only 22%, suggesting that policies in some states that mandate reporting to child welfare are incongruent with people's views about reporting. While about one-quarter or more agreed that health departments, CPS, and the police should leave pregnant people who use cannabis alone, the somewhat greater support for the involvement of health departments and providers over reporting to CPS and the police, suggests slightly less concern about public health and health care provider surveillance than surveillance by government agencies that enforce policies such as criminal prosecution and family separation. At the same time, a somewhat larger proportion—one third or more—were also unsure whether any of these health care or government institutions should be involved. Evidence suggests that CPS involvement does not improve the health or safety of infants and that child removal has a negative impact of parents' physical and mental health, and that it can adversely impact antenatal health in subsequent pregnancies [38]. People's ambiguous level of support for involvement from CPS or health departments—as indicated by the high proportion who were unsure--may stem from uncertainty or lack of awareness about whether these institutions play a supportive or punitive role in relation to people's cannabis use. Some people may support reporting policies out of a desire to protect pregnant people from harming themselves and their children, a desire to connect people to supportive resources and services, or it may reflect an endorsement for screening and surveillance of pregnant people. Interviews with hospital-based clinicians about substance use during pregnancy suggested that they were mostly opposed to reporting pregnant people who used cannabis [35,39]. Those who reported pregnant and birthing people to government authorities often recognized the punitive nature of this practice, although they also reported pregnant people out of a desire to connect patients to supportive services and to protect the baby from harm [35,39]. This research is an important contribution to the literature as it elucidates the perspectives of recently pregnant people—the people who are most directly affected cannabis use policies and practices - perspectives that have

rarely been considered in the development of such policies. Furthermore, by working closely with our community advisory board to develop survey items and to interpret results we ensure, these findings provide additional perspectives to inform policy discussions.

People's support for punitive policies varied largely by whether people themselves used cannabis. Those most likely to support such polices were overwhelmingly those who did not use cannabis in the year before or during their pregnancy, whereas people who used cannabis either during or before a recent/current pregnancy were less supportive. These findings point to the importance of considering people who use cannabis when developing and implementing policies related to cannabis use. Lack of support among people targeted by such policies could indicate that such policies will compromise people's trust in health care providers and institutions and prevent care seeking behaviors.

We found that people's views about the safety of using cannabis during pregnancy were strongly associated with theirs views about punishment. People who viewed cannabis use during pregnancy as largely unsafe were more likely to support punitive policies and practices, a finding that may be rooted in a desire to safeguard the health and safety of the pregnant person or fetus, or a desire to punish people for behaviors that they perceive as unsafe by preventing them from working and raising their children[31].

### 4.1 Limitations

Study limitations include our cross-sectional design which precludes our ability to assess the direction of the relationship between cannabis use beliefs and use and support for punishment. Furthermore, while survey items were generated from peer-reviewed research, as well as from researchers and our community advisory board of six people with lived experiences using cannabis, we did not conduct cognitive testing. Further, while our punishment scale aimed to measure support for punitive policies had high internal consistency reliability, endorsement of some items—for example drug

testing and involvement of CPS, the police, and health departments-- may have been grounded in a belief that these will protect and not harm pregnant people and infants. Additional research is needed to better understand the context that shapes attitudes about punishing people who use cannabis during pregnancy and whether these attitudes are rooted in a desire to punish, or a consequence people are willing to live with as they seek to protect children. We also need more research to assess the impact of current policies on pregnant and birthing people's well-being and whether they have the intended effect of protecting people from harm.

### 4.2. Conclusions

We find that most recently or currently pregnant believe that people who use cannabis during pregnancy should be able to talk to their doctor without getting in trouble; half believe that pregnant people should have the right to consent before drug testing; and few support reporting pregnant people to CPS, although many people were also unsure. Support for punishment is largely associated with views that cannabis use during pregnancy is unsafe and that people who use cannabis cannot be good parents.

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Table 1. Participant demographic and pregnancy characteristics (n=3,569)

| | Col % (weighted) | N (raw) |
|---|---|---|
| Age group, mean | 31.7[+] | 3,569 |
| 18-20 | 2.9% | 137 |
| 21-24 | 10.1% | 501 |
| 25-29 | 24.0% | 822 |
| 30-34 | 31.0% | 1,047 |
| 35-39 | 21.1% | 707 |
| 40-49 | 10.9% | 335 |
| Race/ethnicity /language | | |
| Black, Non-Hispanic | 11.2% | 366 |
| White, Non-Hispanic | 58.0% | 2,313 |
| More than one race/other, non-Hispanic | 12.0% | 291 |
| Hispanic-English proficiency only | 6.7% | 214 |
| Hispanic-Bilingual or Spanish proficiency | 12.2% | 385 |
| Education attainment | | |
| No high school diploma or equivalent | 3.8% | 155 |
| High school diploma or equivalent | 21.8% | 857 |
| Some college or Associate degree | 27.4% | 1,276 |
| Bachelor's degree | 27.8% | 831 |
| Master's degree or above | 19.2% | 450 |
| Household Income | | |
| Under $10,000 | 5.4% | 378 |
| $10,000 to $24,999 | 4.2% | 397 |
| $25,000 to $49,999 | 17.3% | 858 |
| $50,000 to $74,999 | 17.1% | 670 |
| $75,000 to $99,999 | 12.9% | 516 |
| $100,000 to $149,999 | 26.6% | 480 |
| $150,000 or more | 16.4% | 269 |
| Marital status | | |
| Married | 70.1% | 2,105 |
| Widowed, divorced, separated | 5.2% | 264 |
| Never married | 9.2% | 458 |
| Living with partner | 15.6% | 742 |
| Current/recent pregnancy outcome | | |
| Birth | 71.5% | 2,494 |
| Miscarriage, pregnancy loss or abortion | 6.4% | 251 |
| Currently pregnant | 22.1% | 824 |
| Cisgendered and heterosexual | 86.8% | 2,966 |
| Number of previous pregnancies | | |
| None | 25.8% | 828 |
| One | 27.0% | 949 |
| Two | 20.9% | 754 |
| Three or more | 26.3% | 1,037 |
| Cannabis use | | |
| None | 66.1% | 1,938 |
| Pre-pregnancy cannabis use, but not during recent pregnancy | 16.8% | 648 |
| Cannabis during recent pregnancy | 17.1% | 982 |
| **Beliefs about cannabis use during pregnancy** | | |
| Using cannabis during pregnancy is safe for the baby | | |
| Disagree | 57.5% | 1,682 |
| Unsure | 30.2% | 1,255 |
| Agree | 12.3% | 630 |
| People who use cannabis during pregnancy can be great parents | | |
| Disagree | 20.0% | 547 |
| Unsure | 32.2% | 1,104 |
| Agree | 47.8% | 1,917 |

[+] Mean

Figure 1. Endorsement of individual items to measure support for policies that criminalize, surveil, or report people who use cannabis, weighted unadjusted proportions (N=3,568)

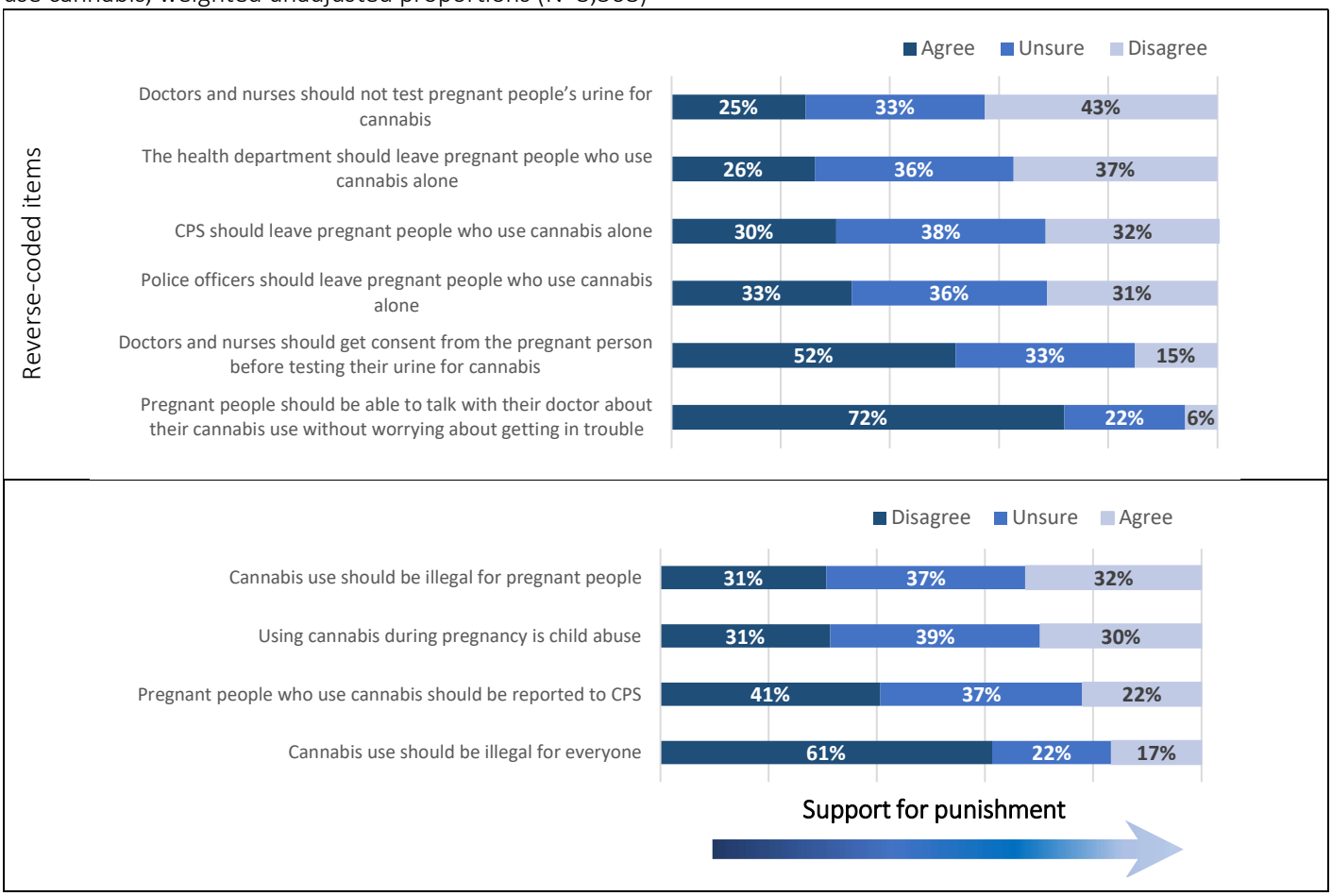
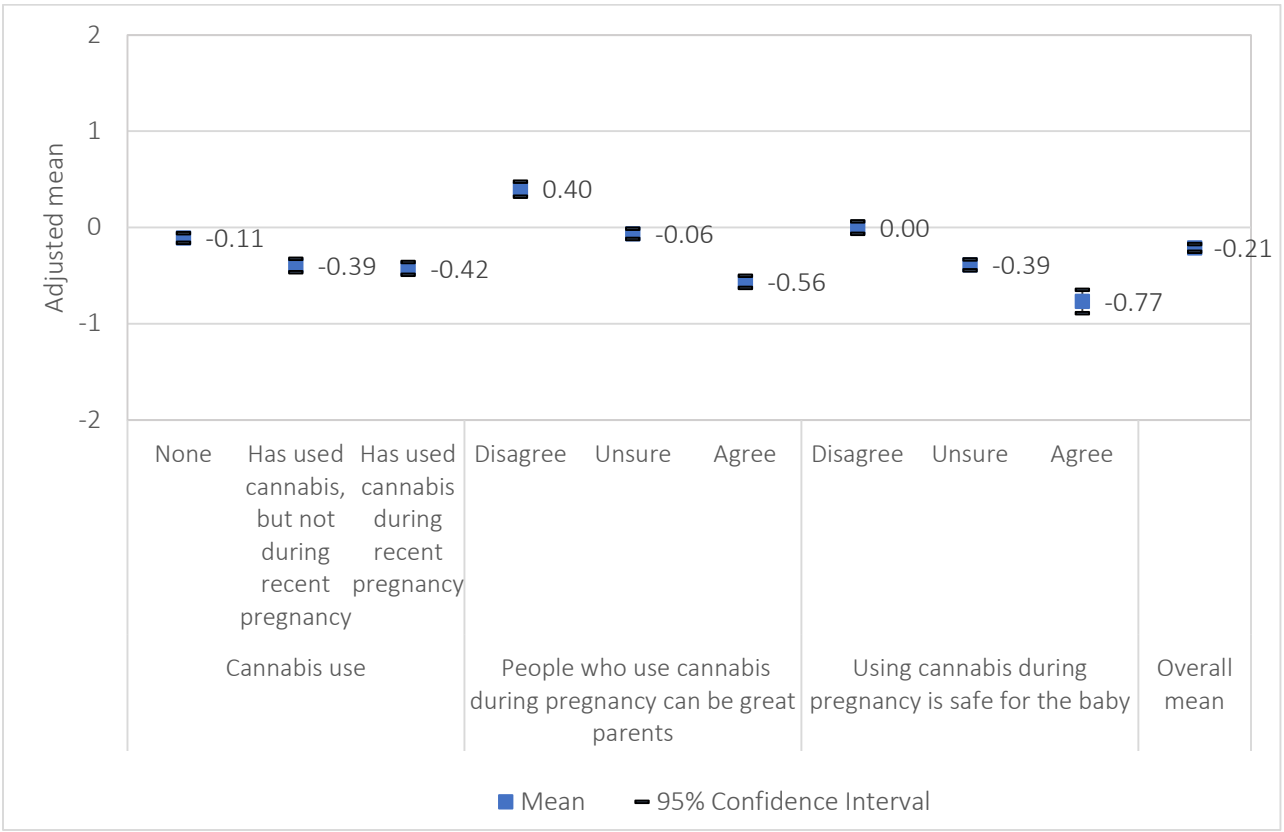


Table 2. Mixed effects multivariable regression analyses examining associations between beliefs about cannabis use and support for criminalizing, surveilling, and reporting people who use cannabis

| Beliefs about cannabis use safety and parenting | Outcome: Support for criminalizing, surveilling, and reporting people who use cannabis | | | |
|---|---|---|---|---|
| | Full model (n=3,565) | No cannabis use (n=1,936) | Pre-pregnancy cannabis use, but not during pregnancy (n=647) | Cannabis use during pregnancy (n=982) |
| | Coef. (95% CI) | Coef. (95% CI) | Coef. (95% CI) | Coef. (95% CI) |
| Using cannabis during pregnancy is safe for the baby | | | | |
| Disagree | 0.43*(0.34,0.51) | 0.37*(0.28,0.45) | 0.40*(0.29,0.52) | 0.47* (0.26,0.68) |
| Unsure (Reference) | | | | |
| Agree | -0.47*(-0.58,-0.36) | -0.67*(-0.86,-0.47) | -0.15(-0.42,0.12) | -0.21*(-0.26,-0.16) |
| People who use cannabis during pregnancy can be great parents | | | | |
| Disagree | 0.48*(0.39,0.57) | 0.52*(0.42,0.62) | 0.30*(0.09,0.51) | 0.39* (0.07,0.72) |
| Unsure (Reference) | | | | |
| Agree | -0.55*(-0.63,-0.46) | -0.43*(-0.50,-0.35) | -0.60*(-0.78,-0.42) | -0.57* (-0.68,-0.45) |

Coef.= unstandardized beta coefficient; CI= Confidence interval; Support for punishment scale ranges from −2 to 2 with higher scores indicating more support for punishment; All models are fit using weighted mixed effects linear regression analyses adjusting for demographic (age, race, ethnicity, language proficiency, educational attainment, household income and heterosexual identity) and pregnancy (pregnancy outcome and gravidity) characteristics and include a random effect for state of residence.

Figure 2. Mean (adjusted) levels of support for policies that criminalize, surveil, or report people who use cannabis by cannabis use and cannabis beliefs (N=3,565)




Note: Means are based on adjusted predicted values estimated from weighted mixed effects linear regression analyses adjusting for demographic (age, race, ethnicity, language proficiency, educational attainment, household income, relationship status, and heterosexual identity) and pregnancy

(pregnancy outcome and gravidity) characteristics; Support for criminalization scale ranges from −2 to 2 with higher scores indicating more support for punishment.