

Experiences of Violence and Unsafe Living Situations and Associations with Cannabis Use During Early Pregnancy

Introduction

- Intimate partner violence (IPV) and cannabis are correlated and associated with myriad health issues including mental health and pregnancy-related outcomes (i.e., unintended pregnancy, preterm birth, low birth rate)
- Active IPV is underreported, and individuals may be more likely to report past experiences of violence or unsafe/unstable living situations, which are related to IPV
- By analyzing the relationship between safety and cannabis among pregnant individuals, findings could help tailor interventions to address violence, safety, and cannabis use during pregnancy

Objective

To estimate the associations between experiences of current IPV, past-year violence, and unsafe/unstable living situations with cannabis use during early pregnancy

Methods

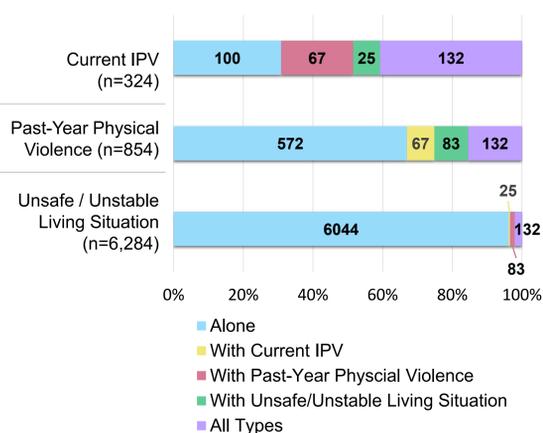
- Design:** Cross-sectional study using electronic health record data
- Sample:**
 - Patient pregnancies between 2014 and 2023 at Kaiser Permanente Northern California (KPNC), a large integrated health system
 - Completed the violence and cannabis screening questions on a universal screener administered at prenatal care entry
 - And had a cannabis urine toxicology test
- Measures:**
 - Current IPV:** "Are you in a relationship with someone who threatens or physically hurts you?"
 - Past-Year Physical Violence:** "Within the last year, have you been hit, slapped, kicked, or otherwise physically hurt by someone?"
 - Unsafe/Unstable Living Situation:** "Is your living situation unsafe/unstable?"
 - Cannabis Use:** Any use of "marijuana/cannabis" since pregnancy began OR positive urine toxicology test
- Analysis:**
 - Descriptive statistics, chi-square tests for unadjusted associations
 - Modified Poisson regression models for adjusted associations
 - Models adjusted for sample characteristics, pregnancy onset year, and accounted for multiple pregnancies per individual

Conclusions

- Past-year violence and unsafe/unstable living situations were **positively associated** with prenatal cannabis use
- Current IPV is **difficult to screen** for due to timing and readiness to disclose and **often co-occurs** with other safety issues
- Interventions** that incorporate education, advocacy, and connections to mental health and IPV services **could help reduce** cannabis use and recurrent violence and improve pregnancy-related outcomes and patient safety

Results

Figure 1. Occurrence and Co-Occurrence of IPV, Past-Year Physical Violence, and Unsafe/Unstable Living Situation during Pregnancy



From 2014-2023, 7,023 of the 303,178 pregnancies (2.4%) endorsed at least one experience of violence or unsafe living situation. Of the violence and safety items, Current IPV was the least commonly endorsed and 69.1% of the time it was co-endorsed with at least one other type of violence or unsafe living situation.

Figure 2. Crude Prevalence and Adjusted Prevalence Ratio of Prenatal Cannabis Use By Current IPV, Past-Year Physical Violence or IPV, and Unsafe/Unstable Living Situation

Exposure	Cannabis Use <u>without</u> Exposure	Cannabis Use <u>with</u> Exposure	aPR (95% CI)	p-value
Current IPV	7.2% 21,485 / 298,928	15.4% 50 / 324	1.15 (0.88 – 1.50)	0.320
Past-Year Physical Violence or IPV	7.2% 21,656 / 302,199	21.7% 212 / 979	1.30 (1.14 – 1.48)	<.001
Unsafe/Unstable Living Situation	7.1% 21,087 / 296,189	11.4% 713 / 6,284	1.22 (1.14 – 1.30)	<.001
Any Violence or Unsafe/Unstable Living	7.1% 20,979 / 296,155	12.7% 889 / 7,023	1.23 (1.16 – 1.31)	<.001

Note: Adjusted models accounted for all covariates listed in Table 1 (right), pregnancy onset year, and accounted for multiple pregnancies per individual.

Table 1. Sample Characteristics by Report of Any Experiences of Violence or Unsafe/Unstable Living Situations

Characteristic	Any Violence or Unsafe/Unstable Living Situation		p-value
	No N=296,155	Yes N=7,023	
Age at Pregnancy Onset			
< 25 years	38,904 (13.1)	1,085 (15.5)	<.001
25-34 years	167,206 (56.5)	3,700 (52.7)	
≥ 35 years	90,045 (30.4)	2,238 (31.9)	
Weeks Gestation (Median [IQR])	8 [6-10]	8 [6-10]	0.083
Race/Ethnicity			<.001
Hispanic	83,761 (28.3)	1,910 (27.2)	
Black	17,645 (6.0)	789 (11.2)	
Asian	79,537 (26.9)	1,236 (17.6)	
White	101,939 (34.4)	2,740 (39.0)	
Another or unknown race	13,273 (4.5)	348 (2.6)	
Neighborhood Deprivation Index			<.001
1 st (least deprivation)	53,606 (18.1)	1,088 (14.5)	
2 nd	84,725 (28.6)	1,931 (27.5)	
3 rd	86,809 (29.3)	2,203 (31.4)	
4 th (most deprivation)	71,015 (24.0)	1,801 (25.6)	
Insurance Type			<.001
Public	37,928 (12.8)	1,194 (17.0)	
Private	258,227 (87.2)	5,829 (83.0)	
Pregnancy Intention			<.001
Wanted	112,945 (38.1)	2,379 (33.9)	
Wanted, but not at time	26,087 (8.8)	859 (12.2)	
Did not want	8,534 (2.9)	379 (5.4)	
Unknown	36,508 (12.3)	863 (12.3)	
Not asked	112,081 (37.9)	2,543 (36.2)	
Parity			<.001
0	119,929 (40.5)	2,923 (41.6)	
1	111,289 (37.6)	2,424 (34.5)	
2 or more	64,907 (21.9)	1,675 (23.9)	
Unknown	30 (0.0)	1 (0.0)	
Cohabiting with...			<.001
Partner or baby's father	268,663 (90.7)	5,725 (81.5)	
Other family	16,670 (5.6)	734 (10.5)	
Other	6,696 (2.3)	453 (6.5)	
Unknown	4,126 (1.4)	111 (1.5)	
Depressive Symptoms			<.001
Moderate/Severe	29,304 (9.9)	1,136 (16.2)	
None/Mild	239,886 (81.0)	5,244 (74.7)	
Missing	26,965 (9.1)	643 (9.2)	

Note: Data are presented as n (%) unless noted. Depressive symptoms categories were based on the Patient Health Questionnaire (PHQ-9), score ≥10 indicates moderate/severe symptoms. The census-based Neighborhood Deprivation Index was categorized into quartiles using the distribution from the overall KPNC population in 2021.