Alcohol and Substance Use in Pregnancy During the COVID-19 Pandemic

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INTRODUCTION

- Alcohol and substance use during pregnancy have poor perinatal and neurodevelopmental implications for mothers and their children[1,2].
- Factors associated with alcohol and substance use during pregnancy include mental health problems[3] and financial difficulties[3].
- The COVID-19 pandemic has impacted alcohol and substance use, as well as mental health and finances [4,5].

AIM: to investigate alcohol, cannabis, tobacco, and illicit drug use in pregnant Canadian individuals during the COVID-19 pandemic to understand: 1) patterns of use, 2) mental health predictors of use and, 3) COVID-19 predictors of use.

METHODS

PARTICIPANTS – From the ongoing study: Pregnancy during the COVID-19 Pandemic, participants were all living in Canada, ≥17 years, and ≤35 weeks pregnant, and could read/write in English or French. **7470** participants completed the online intake survey and **3750** completed a ~1 month follow-up survey (between Apr. 5-Sep. 8, 2020).

Alcohol and Substance Use Survey: Number of days/week they used, and number of drinks/products used per day.

Mental Health Survey: Edinburgh Depression Scale (EPDS) and PROMIS Anxiety Adult 7-item short form.

COVID-19 Survey: Worry about COVID-19 threatening their baby's life, mom and baby not receiving the care they need, feelings of social isolation, and financial difficulties. Scale 0 (not at all) to 100 (very much so).

STATISTICAL ANALYSIS – Binary logistic regression tested if mental health and COVID-19 factors were associated with alcohol/substance use at intake. Generalized estimating equations tested if mental health and COVID-19 factors at intake predicted alcohol/substance use at follow-up. Models controlled for demographic and/or mental health variables.

TABLE 1

n=7470		Mean ± SD	Range
Maternal Demographics	Age (years)	31.9 ± 4.5	18.0 to 50.5
	Education (mode)	Bachelor's degree	-
	Household Income (median/year)	$100,000-124,999 CAD	-
	Gestational weeks	21 ± 9	4.0 to 35.0
	Caucasian (%)	81.6%	-
	Married or Cohabiting (%)	95.7%	-
Maternal Mental Health	EPDS T-Score	10 ± 5	0 to 30
	Clinically-elevated (% score ≥13)	32.9%	-
	PROMIS Anxiety T-Score	58.3 ± 8.3	36.3 to 82.7
	Clinically-elevated (% score ≥60)	47.4%	-
COVID-19 Factors	Financial Difficulties	21 ± 2	1 to 100
	Threat to Baby Life	52 ± 26	1 to 100
	Not Receiving Care	36 ± 28	1 to 100
	Social Isolation	64 ± 27	1 to 100

Table 1. Participant demographics, mental health, and COVID-19 factors at intake.
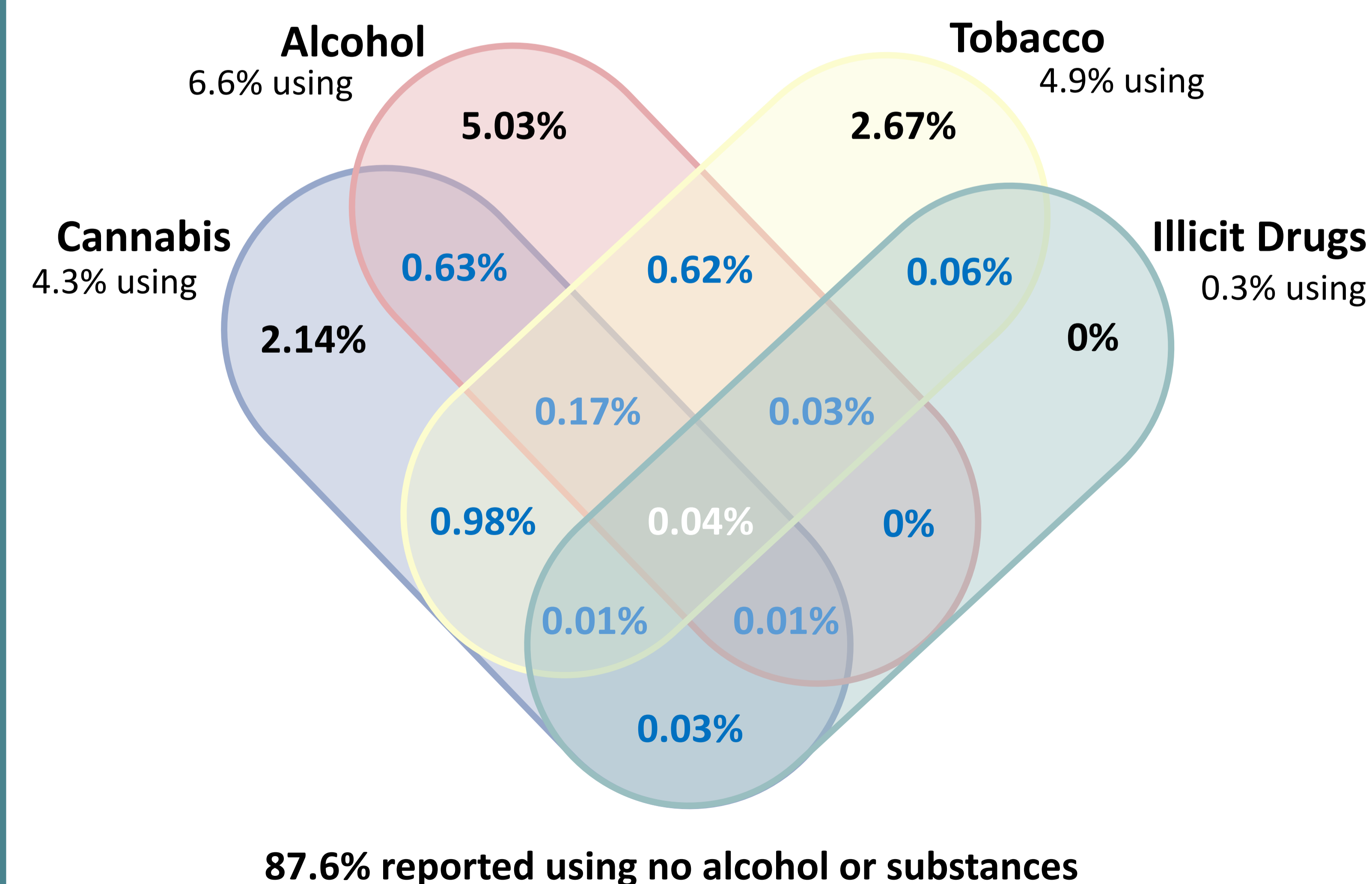
FIGURE 1

Figure 1. The percentage of participants using alcohol and each substance, or a combination of them, at intake. 12.4% of pregnant individuals were using at least one substance.

RESULTS

Mental Health – Pregnant individuals with clinically-elevated depression symptoms were more likely to use cannabis and tobacco at intake ($p<0.001$) and follow-up ($p<0.001$). Clinically-elevated anxiety symptoms increased odds for cannabis use at intake ($p=0.004$), and cannabis and tobacco use at follow-up ($p<0.001$).

COVID-19 – Less worry about COVID-19 threatening the baby's life increased odds for alcohol use at intake ($p=0.009$) and follow-up ($p=0.010$). More financial difficulties increased odds for cannabis and tobacco use at intake ($p<0.001$) and follow-up ($p<0.001$).

DISCUSSION

- Cannabis use rates are comparable to estimates in North America. Alcohol, tobacco, and illicit drug use rates are lower[1], which may reflect the sociodemographic profile of the sample[3], or fewer opportunities to use during the pandemic[6,7].
- Clinically-elevated symptoms of mental health were associated with substance use throughout pregnancy, consistent with literature prior to the pandemic[3].
- Substance use may be a coping mechanism for pandemic-related financial difficulties or may be more accessible for individuals working from home[6,7]. Alcohol use was associated with less concern about COVID-19 threatening the baby, perhaps reflecting less concern about the pregnancy overall.
- There is a need for comprehensive care, including screening, education, and access to perinatal, mental health, and financial supports, especially during the pandemic[1,4,5].

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