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Identifying early intervention opportunities for illicit stimulant use: a cross-sectional study among young people accessing integrated youth services in British Columbia, Canada

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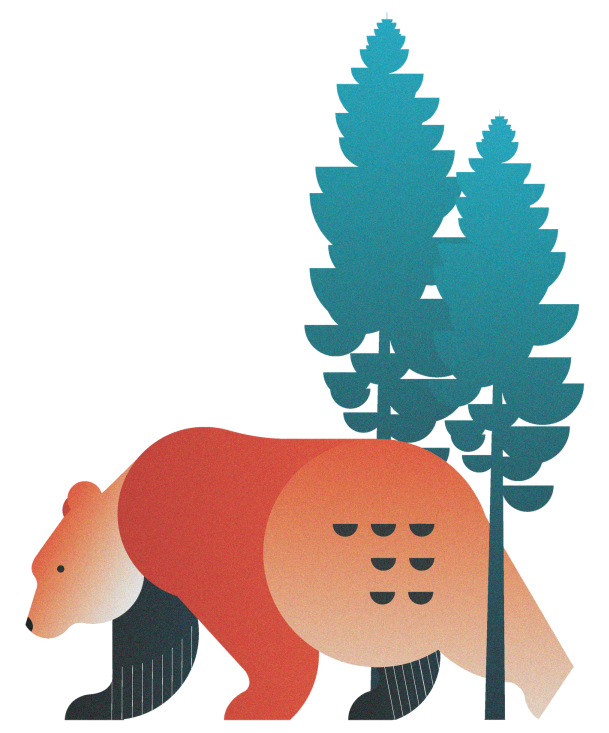

Research Highlights

1. A total of 163 (3%) of youth accessing integrated youth services (n=5620) reported past 30-day illicit stimulant use
2. Youth who have been exposed to violence and crime and polysubstance use have higher odds of illicit stimulant use
3. To meet the needs of this important subgroup, additional harm reduction and trauma-informed practices are recommended

This research takes place on the stolen, traditional, and ancestral lands of the Coast Salish Peoples, including the territories of the xʷməθkwəy̓əm (Musqueam), Skwxwú7mesh (Squamish), and səl̓ílwitulh (Tsleil-waututh) Nations.

Partners and Funders

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Background

- Adolescence and young adulthood is the peak developmental period for substance use initiation, and, therefore, a critical time for the prevention and early intervention of substance use [1].
- In North America, illicit stimulants, including cocaine, methamphetamine and other amphetamine-type substances, are among the most common illicit substances used by youth [2, 3].
- As illicit stimulant-related harms are increasing (e.g., toxic drug-related deaths), it is crucial to investigate youth-specific interventions.
- Integrated youth services (IYS) are a low-barrier healthcare and social service that may provide such an opportunity [4].
- However, no research has yet examined illicit stimulant use among youth accessing IYS or other youth-specific settings, limiting evidence on how to best support this important population.

Objective

To inform early intervention opportunities for illicit stimulant use among youth by identifying the risk and protective factors associated with illicit stimulant use.

Methods

Design and Setting:

- A cross-sectional analysis of routinely collected patient-reported outcomes (PRO) data among youth (ages 12-24) accessing IYS at Foundry between April 2018 and January 2022.
- Foundry centres deliver health and social services in five core service streams: physical and mental health, substance use, and social and peer support.
- During the study period, there were 13 community-based Foundry centres across British Columbia, Canada.

Measures and Variables:

- A comprehensive set of self-reported demographic and health-related questionnaires were voluntarily collected at the time of the first visit to Foundry.
- **Dependent Variable –** Binary variable (yes/no) for illicit stimulant use in prior 30 days, including any self-reported illlicit cocaine/crack cocaine and/or amphetamine/methamphetamine use.
- **Independent Variables –** Individual demographic, interpersonal, and environmental risk and protective factors were selected based on established frameworks and the availability of data.

Analysis:

- Descriptive statistics to summarize individuals' characteristics and risk/protective factors
- Multivariable logistic regression to explore the association between the risk/protective factors and past 30-day illicit stimulant use.

Results

- From our analytic sample (n=5620), 163 (3%) of youth reported illicit stimulant use in the prior 30 days.
- The bar charts display select demographic, environmental, and individual characteristics for youth reporting illicit stimulant use vs. no illicit stimulant use in past 30 days.
- The adjusted multivariable logistic regression (Table 1) suggested that older age, identification as boy/man, exposure to violence and polysubstance use (occasional or regular tobacco, regular alcohol, ever tried hallucinogen or MDMA) were significantly associated with a higher odds of past 30-day illicit stimulant use.

Select Sample Characteristics and Illicit Stimulant Use (n=5,620):

Self-reported illicit stimulant use in prior 30 days 3%

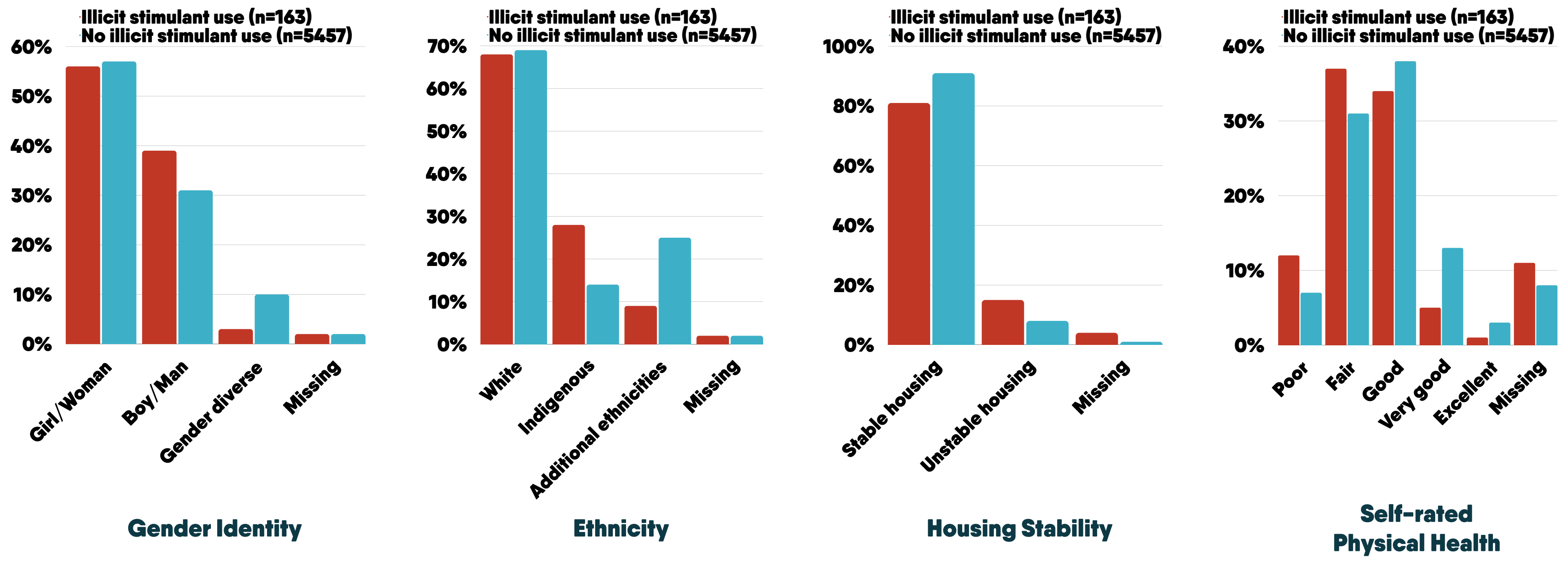

Table 1. Unadjusted and adjusted odds ratios from the multivariable logistic regression of risk/protective factors associated with illicit stimulant use among youth (n=5,620)

Characteristic	Unadjusted Odds Ratio (95% Confidence Interval)	Adjusted Odds Ratio (95% Confidence Interval)
Age	**1.32 (1.25, 1.39)**	**1.27 (1.17, 1.38)**
Gender identity (reference: Girl/Woman)	-	-
Boy/Man	0.78 (0.57, 1.09)	**1.71 (1.10, 2.70)**
Gender diverse	**0.27 (0.10, 0.58)**	0.50 (0.14, 1.40)
White vs. non-White	0.92 (0.66, 1.30)	1.16 (0.73, 1.88)
Not in education and/or employment vs. Yes	**3.56 (2.51, 5.01)**	1.30 (0.80, 2.07)
Self-rated physical health (reference: poor)	-	-
Fair	0.72 (0.43, 1.26)	1.40 (0.71, 2.90)
Good	**0.54 (0.32, 0.95)**	1.64 (0.83, 3.43)
Very good	**0.23 (0.09, 0.95)**	0.96 (0.34, 2.56)
Excellent	**0.26 (0.04, 0.90)**	1.73 (0.24, 7.80)
Unstable housing vs. Stable housing	**2.06 (1.29, 3.16)**	0.72 (0.38, 1.29)
Ability to talk to a family member in case of problems (reference: yes)	-	-
Sometimes	1.38 (0.94, 2.05)	1.45 (0.90, 2.37)
No	**1.72 (1.05, 2.79)**	1.88 (0.98, 3.57)
Witnessed or experienced violence in past 3 months vs. No	**3.90 (2.81, 5.45)**	**2.32 (1.47, 3.68)**
GAIN-SS Internalizing Disorder Score	**1.34 (1.18, 1.54)**	0.95 (0.79, 1.16)
GAIN-SS Externalizing Disorder Score	**1.38 (1.24, 1.53)**	0.97 (0.83, 3.43)
GAIN-SS Crime/Violence Score	**2.13 (1.89, 2.39)**	**1.39 (1.13, 1.69)**
Marijuana (references: Never tried/tried a few times)	-	-
Former	**11.01 (6.22, 19.98)**	0.91 (0.42, 2.01)
Occasional in social situations	**4.17 (2.30, 7.71)**	0.70 (0.32, 1.55)
Regular/daily use	**13.34 (8.25, 22.69)**	0.77 (0.38, 1.61)
Tobacco (references: Never tried/tried a few times)	-	-
Former	**3.71 (1.59, 8.04)**	0.93 (0.33, 2.43)
Occasional in social situations	**7.73 (4.22, 14.37)**	**3.06 (1.44, 6.60)**
Regular/daily use	**20.20 (12.64, 34.08)**	**3.74 (1.95, 7.54)**
Alcohol (references: Never tried/tried a few times)	-	-
Former	**18.51 (8.07, 47.71)**	1.63 (0.42, 5.32)
Occasional in social situations	**10.98 (5.46, 26.19)**	2.12 (0.78, 7.43)
Regular/daily use	**72.32 (34.43, 177.10)**	**6.90 (2.36, 25.42)**
Ever tried Hallucinogens	**15.24 (10.58, 22.50)**	**3.24 (1.82, 5.91)**
Ever tried MDMA	**18.88 (13.26, 27.43)**	**2.53 (1.48, 4.39)**
Ever tried Inhalants	**8.80 (6.11, 12.52)**	1.56 (0.94, 2.54)
Ever tried Heroin/fentanyl	**9.14 (5.51, 14.63)**	1.57 (0.81, 3.00)

Conclusions

- These results complement prior studies with community samples and provide further evidence of the risky environments to which youth using illicit stimulants are exposed [5].
- The risk and protective factors associated with illicit stimulant use suggest the need for integration of harm reduction and trauma-informed practices in youth-specific mental health and substance use care settings.
- Overall, this study provides clinicians and decision-makers critical directions for identifying youth who may benefit from further screening and services to reduce harms associated with illicit stimulant use.