Association Between Unmet Help Needs for Substance Use Challenges and Mental Health in Canada: Evidence from the 2020 Canadian Perspectives Survey Series (CPSS)

Sulemana Saaka *, Roger Antabe, Sulemana Alhassan Saaka, Mildred Naamwintome Molle

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Article

Association Between Unmet Help Needs for Substance Use Challenges and Mental Health in Canada: Evidence from the 2020 Canadian Perspectives Survey Series (CPSS)

Sulemana Ansumah Saaka [1,*], Roger Antabe [2], Sulemana Alhassan Saaka [3] and Mildred Naamwintome Molle [1]

[1] Department of Geography and Environment, Faculty of Social Science, University of Western Ontario, Canada

[2] Department of Health and Society, University of Toronto Scarborough, Toronto-Canada

[3] Department of Political Science, McMaster University, Ontario, Canada

* Correspondence: ssulem@uwo.ca

Abstract

Background/Objectives: In Canada, understanding the connection between substance use, help-seeking behaviors, and mental health (MH) is crucial for improved public health outcomes. Despite advances in MH services, gaps persist in addressing unmet needs of substance users. **Methods**: Utilizing data (N=3,910) from the 2020 Canadian Perspectives Survey, and employing logistic regression models, this study assessed the impact of unmet help needs (UHNs) on MH of substance users. **Results**: The findings indicate that individuals who experienced UHNs for substance use (OR=0.196; P<0.001) significantly reported lower odds of Positive Mental Health (PMH). Non-prescription drug users (OR=0.585; P<0.001), weekly (OR=0.544; P<0.05) and daily cannabis users (OR=0.605; P<0.05), as well those who felt uncomfortable seeking substance-use related help (OR=0.595; P<0.001), all reported lower odds of PMH. **Conclusions**: The use of non-prescription drugs, frequent cannabis consumption, experience of UHNs, and discomfort in seeking help for substance use are significantly associated with lower odds of PMH. Thus, accessible, stigma-free and timely MH and harm reduction services are crucial for promoting PMH among substance users in the study context.

Keywords: Canada; mental health; substance use; help seeking behaviors; UHNs

1. Introduction

The intricate relationship between substance or drug addiction challenges, help-seeking, and MH outcomes forms a critical area of enquiry within the landscape of social welfare and public health in Canada. Undoubtedly, substance use disorders are intertwined with experiences of stigma and MH issues [1,2], creating complex arrays of challenges for individuals seeking support and treatment. Within the Canadian context, substance use help-seeking is influenced by various determinants of health, including socioeconomic disparities [3,4], inequitable access to healthcare services, homelessness, and systemic factors that tend to disproportionately affect the most vulnerable and marginalized populations [5]. These factors not only influence the prevalence of substance use disorders and MH conditions but also shape the efficacious use of available interventions. Fischer et al., [6] emphasized that while public health measures for addressing high-risk drug use have increased locally in Canada, access remains a major issue due to a multiplicity of factors, including federal drug law enforcement and justice initiatives that reinforce a rather repressive approach to service utilization. For instance, the C-22 bill that was introduced by the Liberal government in

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February 2021, aimed to eliminate mandatory minimum penalties (MMP) for certain criminal offenses, including proposed *diversion to treatment* for simple drug possession cases [7]. Although conditional sentencing (a method dating back to 1996 and aims to reduce incarceration rates for non-violent offenders) aligns with the popular call for drug decriminalization in Canada, it presents several challenges. For example, while "treatment orders" may appear therapeutically beneficial to a drug-using offender, such approaches however have mixed implication as many such offenders do not qualify for a drug use "disorder/addiction" condition and therefore find themselves misplaced in treatment [7]. Also, such approaches, unintentionally deters people with addiction challenges from seeking or accessing formal support services due to fear of subjugation to conditional sentencing or "forced treatment" masqueraded as *diversion to treatment*. Against this backdrop, understanding the pathways to substance use help-seeking, experiences of UHNs and mental health of people with substance use challenges, is paramount.

Substance use help-seeking encompasses a spectrum of processes, ranging from individual moments of introspection and acknowledgement of the need to access formalized treatment programs and community-based support networks. Individuals grappling with substance addiction confront a myriad of internal and external factors—ranging from psychological distress to societal pressures and systemic barriers—as they navigate the path towards healing and recovery [6,8]. In essence, the decision to seek help is often tangled with stigma, fear of judgment and criminalization [7,8], highlighting the need for destigmatization efforts and culturally competent care that will foster the habit of help-seeking among people with substance use challenges. The stigma surrounding addiction and mental illness continues to deter individuals from seeking the help they need and deserve most.

Given the growing recognition of the interconnectedness of substance use challenges, stigma, help seeking behaviors, UHNs for addiction issues, and their profound impact on MH, important strides have been made in Canada to enhance access to substance use and mental health services [6]. For instance, initiatives such as integrated care models, harm reduction strategies, and peer support programs have shown promise in addressing the holistic needs of individuals grappling with substance use disorders and MH challenges in Canada [6]. Nonetheless, significant gaps persist on UHNs and MH of substance users, underscoring the need for up-to-date research, continued advocacy, and investment in evidence-based interventions [5].

While studies have explored the relationship between substance use and MH in Canada, there is limited research specifically examining the relationship between experiences of unmet substance use help need and MH of individuals with addiction challenges. Meanwhile, such knowledge is essential for informing more targeted and equitable interventions aimed at addressing the problems of addiction and MH in the country. This study fills the scholarly void by examining the association between experiences of UHNs for substance use challenges, help-seeking pathways, and the MH of substance users in Canada.

Theoretical Context

The biopsychosocial model [9] provides a comprehensive framework for understanding how biological, psychological, and social factors interact to influence health outcomes. In the context of UHNs for substance use and MH, this model recognizes that besides biological factors, various psychological, and socially interconnected factors contribute to mental well-being. Thus, given the comprehensive and multifaceted approach of the biopsychosocial model, it has been widely recognized and used in the field of MH [10–13].

Biologically, while genetic predispositions and neurotransmitter imbalances can increase the risk of mental health disorders, high potency cannabis use can also affect the brain through the endocannabinoid system, potentially leading to structural and functional changes associated with mood and cognition [14–17]. Psychologically, individual differences in personality, coping strategies, and subjective experiences of cannabis intoxication or overdose of Non-prescription drugs can modulate MH outcomes, with vulnerable individuals at greater risk of negative effects. Socially, peer

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influence, socioeconomic status, and social support networks influence patterns of cannabis use and MH outcomes [18–20]. The social environment is inclusive of both the characteristics of interactions that encourage people to seek help or do not judge people who intend to seek help for their substance addictions, as well as those characteristics that may induce feelings of discomfort or unwillingness to seek help. Moreover, cultural attitudes toward illicit use of Non-Prescription drugs, cannabis, and alcohol, play a role in shaping their effects on mental well-being of users. Overall, the biopsychosocial model underscores the importance of considering the complex interplay of biological, psychological, and social factors in understanding the relationship between cannabis use and MH, informing more holistic interventions and policies to promote mental well-being among substance users.

2. Materials and Methods

Data Collection

This study uses data from the Canadian Perspectives Survey Series (CPSS) organized by Statistics Canada where residents of the 10 Canadian provinces 15 years of age or older are targeted. Statistics Canada's pilot probability panel served as the frame for the survey. The probability panel was created by randomly selecting a subset of the Labour Force Survey (LFS) respondents, excluding full-time members of the Canadian Armed Forces. Also, excluded from the survey's coverage are individuals living on reserves and other Aboriginal settlements in the provinces: the institutionalized population, and households in extremely remote areas with very low population density. The LFS sample was drawn from an area frame and based on a stratified, multi-stage design that uses probability sampling. The LFS uses a rotating panel sample design. In the provinces, selected dwellings remain in the LFS sample for six consecutive months. Each month about one-sixth of the LFS sampled dwellings are in their first month of the survey, one-sixth are in their second month of the survey, and so on. One person (aged 15 or above) was randomly selected from each household to participate in the CPSS – Sign-Up. The email addresses of those who agreed to join the CPSS were collected. Participants who provided valid email addresses formed the probability panel [21].

The survey design for the CPSS (Canadian Perspectives Survey Series) was built upon the sample design used for the CPSS – Sign-Up, which is the method employed to establish the initial probability panel. The original sample for the CPSS – Sign-Up consisted of 31,896 randomly selected individuals aged 15 and above from households participating in the Labour Force Survey (LFS), concluding their last interview between April and July of 2019. Among these individuals, 31,626 were deemed eligible for inclusion in the CPSS - Sign-Up during the collection period in January to March 2020. Of those who agreed to take part in the CPSS, which refers to individuals who joined the panel, 7,242 provided a valid email address. All panel participants were encouraged to complete the CPSS surveys. The collection response rate for the CPSS6 – Substance Use and Stigma during the Pandemic stands at 54.4% [21].

Ethical Statement: Based on the license granted to secondary users of Statistics Canada's Public Use Microdata Files (PUMF), we required no additional ethical clearance to reuse the 2022 CPSS dataset for analysis and inferences. Kindly visit the following website for details: https://www.statcan.gc.ca/en/microdata/pumf/application/section

Measures

Outcome variable: the outcome variable of this study was obtained from a question that asked, "In general, how is your mental health?". The response options included "excellent", very good", "good", "fair", "poor", and "not stated". Based on earlier studies [22–24], "excellent", "very good", and "good" were combined as Positive Mental Health (PMH), the outcome variable for this study.

Predictor variables: the main predictor variables for this study are based on questions that asked; (1) whether respondents sought help for their drug or alcohol use problems, and (2) whether the respondents felt they needed help for their emotions, MH or use of alcohol or drugs, but they didn't receive it. Although self-reported unmet needs do not necessarily mean ineffective care being

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provided, it however, encompasses a major component of the overall help-seeking experience that affects future help-seeking behaviors of service users [5]. Related predictors include whether respondents used non-prescription Drugs in the past 30 days, used alcohol in the past 30 days, alcohol intake frequency in the past 30 days, cannabis use and frequency in the past 30 days. Also, whether respondents see the need to hide drug or alcohol problems, whether they find it uncomfortable seeking help for their drug or alcohol problems, whether they have seen/talked to coworker/supervisor/boss, friends, social worker/counsellor/psychotherapist, psychologists, nurse, and doctor/general practitioner about problems with emotions, MH or use of alcohol or drugs. To account for possible confounders, demographic variables, including sex, age, education, immigrant status, and employment status were included for analysis. Geographically, the type of place of residence (rural vs. urban) was also accounted for to ascertain their disparities in the study context.

Analytical Approach

Three levels of analysis were conducted in this study. First, descriptive statistics were used to present an overview of the sample characteristics. Given that the outcome variable is binary, logistic regression models were applied to explore the association between predictors and the outcome variable (Self-rated mental health). Therefore, binary logistic regressions were performed at the bivariate level of analysis to assess the relationship between each predictor variable and the outcome variable. Additionally, multiple logistic regression models were carried out to assess the net relationships between predictors and the outcome variable. Results of the regression models are reported in Odds ratios (OR). Significant Odds ratios above one (OR > 1) indicate a higher likelihood of PMH, while Odds ratios below one (OR < 1) indicate a lower likelihood of PMH. All statistical analyses were conducted using Stata version 18.

3. Results

Sample Statistics

Table 1 presents the results for sample characteristics. Majority of the study sample were females (54.07%), Canadian-born (82.69%), employed (58.54%), and resided in urban areas (79.10%). Also, a significant proportion had a bachelor's degree or above (40.20%). Regarding substance use, while only a smaller proportion reported using non-prescription drugs and cannabis in the preceding 30 days of the survey (see Table 1), a greater majority reported alcohol intake (68.62%) in the past 30 days. Moreover, as high as 92.63% of the study population reported COVID-19 related stress.

Table 1. Statistical distribution of sample characteristics.

Variable	Frequency (%)
Sex	
Men	1796(45.93)
Women	2114(54.07)
Age group	
15 to 24 years old	141(3.61)
25 to 34 years old	479(12.25)
35 to 44 years old	625(15.98)
45 to 54 years old	653(16.70)
55 to 64 years old	915(23.40)
65 to 74 years old	816(20.87)
75 years or older	281(7.19)
Education	

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High school diploma or less	920(23.53)
Trade certificate or diploma	335(8.57)
College/CEGEP/non-university certificate/diploma	938(23.99)
University certificate/diploma below bachelor level	145(3.71)
Bachelor or above	1572(40.20)
Immigrant status	
Canadian born	3233(82.69)
Non-Canadian born	677(17.31)
Employment status	
Employed	2289(58.54)
Not employed	1538(39.34)
Not stated	83(2.12)
Used Non-Prescription Drugs in the past 30 days	
No/not stated	3778(96.62)
Yes	132(3.38)
Used alcohol in the past 30 days	
No/Never drunk/not stated	1227(31.38)
Yes	2683(68.62)
Alcohol intake frequency in the past 30 days	
Once in past 30days	298(7.62)
2-3 times in past 30days	306(7.83)
Once a week	187(4.78)
4 or more times a week	287(7.34)
Not applicable/valid skip/not stated	2832(72.43)
Cannabis use frequency in the past 30 days	
Never used/Not during the past 30 days	3299(84.37)
Once in past 30days	100(2.56)
2-3 times in past 30days	129(3.30)
1-2 days per week	89(2.28)
3-4 days per week	69(1.76)
5-6 days per week	50(1.28)
Daily	174(4.45)
Stress since the start of the covid-19 pandemic	
Not at all stressful	288(7.37)
Stressful	3622(92.63)
Sought Help for drug or alcohol use	
No	3743(95.73)
Yes	167(4.27)
Seen/talked to Coworker/supervisor/boss about problems with emotions, mental health or use of alcohol or drugs	
No	3744(95.75)

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Yes	166(4.25)
Seen/talked to friends about problems with emotions, mental health or use of alcohol or drugs	
No	3239(82.84)
Yes	671(17.16)
Seen/talked to social worker, counsellor, or psychotherapist about problems with emotions, mental health or use of alcohol or drugs	
No	3718(95.09)
Yes	192(4.91)
Seen/talked to psychologist about problems with emotions, mental health or use of alcohol or drugs	
No	3797(97.11)
Yes	113(2.89)
Seen/talked to psychiatrist about problems with emotions, mental health or use of alcohol or drugs	
No	3810(97.44)
Yes	100(2.56)
Seen/talked to Nurse about problems with emotions, mental health or use of alcohol or drugs	
No	3880(99.23)
Yes	30(0.77)
Seen/talked to doctor/general practitioner about problems with emotions, mental health or use of alcohol or drugs	
No	3609(92.30)
Yes	301(7.70
Help for substance use not received when needed most	
No/valid skip	3468(88.70)
Yes	442(11.30)
See the need to hide drug or alcohol problems	
No	511(13.07)
Yes	149(3.81)
Not applicable/Valid Skip/Don't know	3250(83.12)
Find it uncomfortable seeking help for drug or alcohol	
No	534(13.66)
Yes	216(5.52)
Not applicable/Valid Skip/Don't know	3160(80.82)
Rural/Urban indicator	
Rural	817(20.90)

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Urban	3093(79.10)

Bivariate Analysis of Substance Use-Related Help-Seeking and SRMH

Table 2 presents the results for bivariate analysis of substance use help-seeking and SRMH. Demographically, women (OR=0.769; P<0.001) significantly reported lower odds of positive mental health (PMH) relative to men. Relative to those aged15-24year, those between the ages of 25-75 years or above significantly reported PMH (see Table 2). those with a university certificate/diploma below bachelor level (OR=1.607; P<0.001) and the unemployed (OR=1.325; P<0.001) significantly reported higher odds of PMH at the bivariate level. With regards to substance use, those who used cannabis at least 2-3 times in the past 30 days (OR=0.631; P<0.05), 1-2 days per week (OR=0.377; P<0.001), 3-4 days per week (OR=0.377; P<0.001), 5-6 days per week (OR=0.377; P<0.001), as well as daily users (OR=0.280; P<0.001), all significantly reported lower odds of PMH. Also, those who experienced stress during the COVID-19 pandemic (OR=0.177; P<0.001) significantly reported lower odds of PMH relative to those who did not experience any stress.

Regarding substance use help-seeking, those who saw the need to hide drug or alcohol problems (OR=0.313; P<0.001), as well as those who found it uncomfortable seeking help for the drug use or alcohol problems (OR=0.362; P<0.001) significantly reported lower odds of PMH. Even those who sought help for their drug or alcohol problems (OR=0.249; P<0.001), seen/talked to their coworkers/supervisors/bosses (OR=0.249; P<0.001), friends (OR=0.280; P<0.001), social worker/counsellor/psychotherapist (OR=0.234; P<0.001), psychologists (OR=0.184; P<0.001), psychiatrists (OR=0.087; P<0.001), Nurses (OR=0.187; P<0.001), and doctors/general practitioners (OR=0.174; P<0.001) about problems with their emotions, MH or drugs/ alcohol use but did not receive help when needed most (OR=0.101; P<0.001), all significantly reported lower odds of PMH. Furthermore, compared to rural residents, urban residents (OR=0.562; P<0.001) significantly reported lower odds of PMH in the study context.

Table 2. Bivariate results for substance use help-seeking and Self-Rated Mental Health.

VARIABLES	**Bivariate**		
	OR(SE)	95% CI	
Used Non-Prescription Drugs in the past 30 days (Ref: No/not stated)			
Yes	0.307(0.054)	0.216	.436
Used alcohol in the past 30 days (Ref: No/ Not stated)			
Yes	1.063(0.087)	0.904	1.249
Alcohol intake frequency in past 30 days (Ref: Once in past 30days)			
2-3 times in past 30days	0.803(0.153)	0.552	1.168
Once a week	0.738(0.158)	0.484	1.124
4 or more times a week	0.612(0.115) ***	0.423	0 .886
Not applicable/valid skip/not stated	1.102(0.162)	0.826	1.470
Cannabis use frequency in past 30 days (Ref: Never used/Not during the past 30 days)			
Once in past 30days	0.977(0.248)	0.594	1.607
2-3 times in past 30days	0.631(0.127) *	0.425	0.936
1-2 days per week	0.377(0.083) ***	0.244	0 .582
3-4 days per week	0.337(0.083) ***	0.207	0.547

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5-6 days per week	0.337(0.097) ***	0.191	0.595
Daily	0.280(0.044) ***	0.205	0.382
Help for substance use not received when needed most (Ref: No/valid skip)			
Yes	0.101(0.011) ***	0.081	0.126
Sex (Ref: Men)			
Women	0.769(0.059) ***	0.660	0.896
Age group (Ref: 15 to 24 years old)			
25 to 34 years old	1.289(0.250)	0.880	1.887
35 to 44 years old	1.870(0.358) ***	1.285	2.722
45 to 54 years old	2.556(0.495) ***	1.748	3.738
55 to 64 years old	3.293(0.625) ***	2.270	4.778
65 to 74 years old	5.337(1.068) ***	3.604	7.902
75 years or older	7.478(1.996) ***	4.431	12.619
Education (Ref: High school diploma or less)			
Trade certificate or diploma	1.032(0.157)	0.766	1.391
College/CEGEP/non-university certificate/diploma	0.966(0.105)	0.779	1.197
University certificate/diploma below bachelor level	1.607(0.386) *	1.003	2.575
Bachelor or above	1.127(0.112)	0.927	1.370
Immigrant status (Ref: Canadian born)			
Non-Canadian born	1.027(0.104)	0.841	1.255
Employment status (Ref: Employed)			
Not employed	1.325(0.107) ***	1.131	1.553
Not Stated	1.073(0.285)	0.637	1.806
Stress since the start of the covid-19 pandemic (Ref: Not at all stressful)			
Stressful	0.177(0.047) ***	0.105	0.300
See the need to hide drug or alcohol problems (Ref: Disagree)			
Agree	0.313(0.060) ***	0.214	0.456
Not applicable/Valid Skip/Don't know	1.904(0.200) ***	1.549	2.341
Find it uncomfortable seeking help for drug or alcohol (Ref: Disagree)			
Agree	0.362(0.060) ***	0.261	0.503
Sought Help for drug or alcohol use (Ref: No)			
Yes	0.249(0.039) ***	0.182	0.341
Not applicable/Valid Skip/Don't know	1.599(0.170) ***	1.297	1.971
Seen/talked to Coworker/supervisor/boss about problems with emotions, mental health or use of alcohol or drugs (Ref: No)			
Yes	0.280(0.044) ***	0.204	0.383

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Seen/talked to friends about problems with emotions, mental health or use of alcohol or drugs (Ref: No)			
Yes	0.241(0.021) ***	0.202	0.288
Seen/talked to social worker, counsellor, or psychotherapist about problems with emotions, mental health or use of alcohol or drugs (Ref: No)			
Yes	0.234(0.035) ***	0.175	0.315
Seen/talked to psychologist about problems with emotions, mental health or use of alcohol or drugs (Ref: No)			
Yes	0.184(0.036) ***	0.125	0.270
Seen/talked to psychiatrist about problems with emotions, mental health or use of alcohol or drugs (Ref: No)			
Yes	0.087(0.020) ***	0.055	0.139
Seen/talked to Nurse about problems with emotions, mental health or use of alcohol or drugs (Ref: No)			
Yes	0.187(0.070) ***	0.090	0.390
Seen/talked to doctor/general practitioner about problems with emotions, mental health or use of alcohol or drugs (Ref: No)			
Yes	0.174(0.021) ***	0.136	0.222
Rural/Urban indicator (Ref: Rural)			
Urban	0.562(0.059) ***	0.457	0.693

*P<0.05; **P<0.01; ***P<0.001; Odd Ratio (OR), Standard Error (SE), Confidence Interval (CI)

Multivariate Analysis of Substance Use-Related Help-Seeking and SRMH

The results for multivariate analysis are presented in Table 3. In model 1, only substance use-related variables and experience of UHNs were evaluate against the outcome variable. Non-prescription drug use, cannabis use, and experience of UHNs were all significant, and less associated with PMH. To account for possible confounders, more substance use-related variables, as well as socio-demographic variables were included in model 2 for analysis. Although significant associations were observed between the predictors and outcome variable in model 1, model 2 is more robust given the increase of model fitness from 0.1310 in model 1 to 0.2104 in model 2. Thus, the results of model 2 are used for the multivariate analysis.

Consistent with results at the bivariate level, compared to the 15- to 24-year-olds, older individuals (ages ranging from 25-75 years or above) significantly reported PMH (see Table 3). Similarly, compared to individuals with high school diploma or less, those bachelor's degree or above (OR=1.313; P<0.05) significantly reported higher odds of PMH. Contrary to the results at bivariate level, at the multivariate level, the unemployed (OR=0.755; P<0.001) significantly reported lower odds of PMH relative to the employed. With regards to substance use, non-prescription drug users (OR=0.585; P<0.001) and cannabis users including those who used it only once in the past 30 days (OR=1.974; P<0.05), 3-4 days per week (OR=0.544; P<0.05), as well as daily users (OR=0.605; P<0.05),

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all significantly reported lower odds of PMH. Also, consistent with the bivariate results, those who experienced stress during the COVID-19 pandemic (OR=0.313; P<0.001) significantly reported lower odds of PMH.

With regards to substance use help-seeking, those who found it uncomfortable seeking help for drug use or alcohol problems (OR=0.595; P<0.001) significantly reported lower odds of PMH relative to those who did not find it uncomfortable seeking help. Even those who sought help for their drug or alcohol problems (OR=0.249; P<0.001), seen/talked to their friends (OR=0.545; P<0.001), psychiatrists (OR=0.293; P<0.001), and doctors/general practitioners (OR=0.402; P<0.001) about problems with their emotions, MH or drugs/alcohol use but did not receive help when needed most (OR=0.196; P<0.001), all significantly reported lower odds of PMH. Additionally, relative to rural residents, urban residents (OR=0.620; P<0.001) significantly reported lower odds of PMH as consistent with the bivariate results.

Table 3. Multivariate results for substance use help-seeking and Self-Rated Mental Health.

VARIABLES	Model 1		Model 2	
	OR(SE)	95% CI	OR(SE)	95% CI
Used Non-Prescription Drugs in the past 30 days (Ref: No/not stated)				
Yes	0.459(0.094) ***	0.307 0.687	0.585(0.132) *	0.375 0.913
Used alcohol in the past 30 days (Ref: No/ Not stated**)**				
Yes	1.287(0.130) *	1.056 1.570	1.139(0.124)	0.920 1.410
Alcohol intake frequency in past 30 days (Ref: Once in past 30days)				
2-3 times in past 30days	0.807(0.168)	0.537 1.214	0.831(0.182)	0.541 1.278
Once a week	0.884(0.210)	0.555 1.409	1.013(0.261)	0.611 1.680
4 or more times a week	0.795(0.167)	0.526 1.202	0.929(0.215)	0.590 1.463
Not applicable/valid skip/not stated	1.135(0.189)	0.818 1.574	1.046(0.185)	0.738 1.481
Cannabis use frequency in past 30 days (Ref: Never used/Not during the past 30 days)				
Once in past 30days	1.350(0.382)	0.775 2.351	1.974(0.608) *	1.079 3.611
2-3 times in past 30days	0.740(0.163)	0.479 1.142	1.060(0.252)	0.665 1.690
1-2 days per week	0.490(0.121) **	0.301 0.796	0.628(0.165)	0.374 1.053

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3-4 days per week	0.391(0.106) ***	0.229	0.667	0.544(0.158) *	0.308 0.962
5-6 days per week	0.502(0.165) *	0.263	0.959	0.891(0.322)	0.438 1.810
Daily	0.384(0.068) ***	0.271	0.545	0.605(0.125) *	0.403 0.909
Help for substance use not received when needed most (Ref: No/valid skip)					
Yes	0.111(0.012) ***	0.089	0.139	0.196(0.024) ***	0.153 0.250
Sex (Ref: Men)					
Women				0.902(0.085)	0.749 1.087
Age group (Ref: 15 to 24 years old)					
25 to 34 years old				1.138(0.270)	0.715 1.812
35 to 44 years old				1.636(0.384) *	1.032 2.592
45 to 54 years old				1.987(0.469) **	1.251 3.156
55 to 64 years old				2.134(0.488) ***	1.362 3.344
65 to 74 years old				2.947(0.715) ***	1.830 4.744
75 years or older				4.147(1.268) ***	2.277 7.552
Education (Ref: High school diploma or less)					
Trade certificate or diploma				0.901(0.162)	0.633 1.284
College/CEGEP/non-university certificate/diploma				0.997(0.130)	0.771 1.288
University certificate/diploma below bachelor level				1.528(0.437)	0.871 2.679
Bachelor or above				1.313(0.163) *	1.028 1.676
Immigrant status (Ref: Canadian born)					
Non-Canadian born				0.881(0.106)	0.695 1.116
Employment status (Ref: Employed)					

 doi:10.20944/preprints202507.2489.v1

Unemployed		0.755(0.086) *	0.603 0.944
Not Stated		1.039(0.359)	0.527 2.047
Stress since the start of the covid-19 pandemic (Ref: Not at all stressful)			
Stressful		0.313(0.088) ***	0.180 0.544
See need to hide drug or alcohol problems (Ref: Disagree)			
Agree		0.667(0.174)	0.400 1.112
Not applicable/Valid Skip/Don't know		1.267(0.209)	0.916 1.751
Find it uncomfortable seeking help for drug or alcohol (Ref: Disagree)			
Agree		0.595(0.136) *	0.379 0.934
Not applicable/Valid Skip/Don't know		0.872(0.144)	0.631 1.205
Sought Help for drug or alcohol use (Ref: No)			
Yes		0.826(0.179)	0.539 1.265
Seen/talked to Coworker/supervisor/boss about problems with emotions, mental health or use of alcohol or drugs (Ref: No)			
Yes		0.914(0.191)	0.606 1.377
Seen/talked to friends about problems with emotions, mental health or use of alcohol or drugs (Ref: No)			
Yes		0.545(0.063) ***	0.433 0.685
Seen/talked to social worker, counsellor, or psychotherapist about problems with emotions, mental health or use of alcohol or drugs (Ref: No)			

 doi:10.20944/preprints202507.2489.v1

Yes		0.868(0.165)	0.597 1.263
Seen/talked to psychologist about problems with emotions, mental health or use of alcohol or drugs (Ref: No)			
Yes		0.630(0.151)	0.393 1.009
Seen/talked to psychiatrist about problems with emotions, mental health or use of alcohol or drugs (Ref: No)			
Yes		0.293(0.080) ***	0.171 0.502
Seen/talked to Nurse about problems with emotions, mental health or use of alcohol or drugs (Ref: No)			
Yes		0.795(0.369)	0.320 1.978
Seen/talked to doctor/general practitioner about problems with emotions, mental health or use of alcohol or drugs (Ref: No)			
Yes		0.402(0.063) ***	0.294 0.549
Rural/Urban indicator (Ref: Rural)			
Urban		0.620(0.077) ***	0.486 0.791
Measures of model fitness	Number of observations=3,910 Pseudo R2=0.1310	Number of observations=3,910 Pseudo R2=0.2104	
*P<0.05; **P<0.01; ***P<0.001; Odd Ratio (OR), Standard Error (SE), Confidence Interval (CI)			

4. Discussion

Guided by the biopsychosocial model and employing a multifaceted approach that considers demographic factors, substance use and use patterns, substance use help-seeking, and experience of UHNs for substance use, this study evaluated the MH outcomes of substance users in the Canadian context. The study showed a significant association between substance use, experience of UHNs for substance use challenges, and poor self-assessed mental health, particularly among the young people, the unemployed, those who found it uncomfortable seeking help, and urban residents. All components of the theory (i.e., biopsychosocial model) underpinning this study, were associated with the MH outcomes of the study population.

 doi:10.20944/preprints202507.2489.v1

The result of the study shows that non-prescription drug and cannabis users are significantly associated with poor MH in the study context, a finding that aligns with that of prior studies [25,26]. Substance use, particularly, non-prescription drugs and cannabis, can adversely affect the brain and either exacerbate existing MH conditions or trigger the onset of new ones, including anxiety disorders and psychosis [27–30] Additionally, the use of non-prescription drugs and cannabis may occur within social contexts where individuals face peer pressure, social isolation, or unhealthy coping mechanisms, further contributing to poor mental health outcomes. Available evidence suggests that access to timely and adequate support can mediate the cycle of worsening mental health conditions [31], hence, it is not surprising substance users who reported the experience of UHNs also had lower odds of PMH. Experience of UHNs may induce feelings of being isolated, thereby exacerbating feelings of anxiety, depression, and low self-esteem [5]. Overall, experience of unmet substance-use help needs may undermine recovery efforts and can perpetuate a cycle of substance use and poor MH. This highlights the crucial importance of ensuring adequate and timely access to comprehensive support services for people with substance use challenges. Moreover, substance users who found it uncomfortable seeking help, were less associated with PMH. This finding may be explained by several contextual factors including the stigma associated with substance use. Substance use-related stigma has shown to be detrimental to help seeking [32] as it induces feelings of shame/self-blame, isolation, and reluctance to disclose struggles or seek support, eventually leading to worsening MH outcomes. Thus, reluctance to seek help perpetuates a sense of helplessness and isolation, thereby hindering recovery efforts and exacerbating MH issues among substance users. Hence, it is important to destigmatize substance use, promote access to non-judgmental support services, and foster open communication about substance as part of efforts to improve MH outcomes in this population in Canada.

Surprisingly, even those who reported seeing/talking to friends, nurses/general doctors and psychiatrists about their substance use challenges, also had lower odds of PMH. Underlying MH issues or psychological disorders such as psychosis, the timeliness, adequacy or effectiveness of the help being received can influence MH outcomes [6]. Rather than casual contacts, people with substance use disorders who are also experiencing mental illness, may require an in-patient treatment program that specializes in concurrent disorder care. However, most in-patient programs are inflexible, requiring those in need to adjust their expectations based on what is available [33]. Even though some addiction disorders may require in-patient treatments for behavioral change, access to such services, according to the Canadian Center on Substance Use and Addiction (CCSUA), takes longer time relative to outpatient treatment programs which are generally community-based services with much flexibility [33]. In addition to the untimeliness associated with in-patient treatment programs in Canada, several barriers including financial challenges, geographical disparities in service availability (e.g., urban, rural, or remote), life circumstances, priorities, and preferences of substance users affect their decisions to access care. Implicitly, substance users from poor socio-economic backgrounds who may prefer outpatient community-based services including medication, individual or group counselling, case management, psychotherapy, health education, harm reduction and other supports services, may discontinue the utilization of such service due to financial challenges [33]. Considering these findings, policymakers and stakeholders need to consider strategies that address systemic barriers to available addiction and MH services. This may involve implementing flexible and affordable community-based interventions, increasing resources for MH services, and de-stigmatizing conversations around substance use and MH. Additionally, efforts to integrate substance use treatment with MH services can help provide more holistic care and support for individuals experiencing these challenges.

The experience of COVID-19 related stress was also significantly less associated with PMH. Recent studies have shown that COVID-19 related stress has led to poor MH through various mechanisms including the uncertainty and fear surrounding the pandemic [23], as it has triggered or exacerbated feelings of anxiety and depression. Also, the social isolation, lockdown measures, and disruptions to daily routines that came with COVID-19 may have further contributed to feelings of

 doi:10.20944/preprints202507.2489.v1

loneliness, helplessness, and despair[23], particularly among substance users who were already battling with their substance use challenges. In addition, concerns about health risks, financial instability, job loss, and uncertainty about the future were significant stressors that may have heightened the levels of stress and psychological distress associated with substance use. Overall, the cumulative impact of these stressors can manifest in various MH issues, including anxiety disorders, depression, post-traumatic stress disorder, and substance use disorders.

Within the context of UHNs for substance use challenges, older individuals may have better MH outcomes compared to their younger counterparts due to several factors, including past experiences and resilience developed over time. This accumulation of more life experience can shape and enhance the coping mechanisms of older adults to deal with their life course stressors and adversities, including those related to substance use. Prior studies also indicate that older individuals often have more established social support networks, including family, friends, and community connections that can provide them with emotional support, practical assistance, and a sense of belonging, which are protective factors for MH [22,23]. For instance, according to Statistics Canada [34], in 2021 and 2022, although almost half of people in Canada (47%) reported having a strong sense of belonging to their community, this percentage was lower among young people. Thus, tailored interventions are needed for youngsters with substance use challenges in Canada. Also, the association between higher educational attainment and higher odds of PMH may also result from the fact that individuals with higher education often have better exposure and access to wide range of health information sources, including the internet, and MH educational programs, leading to informed decisions and healthy behaviors regarding substance use [35]. Health literacy is often high among people with higher educational attainment, which places them in better position to navigate healthcare access, counseling services, and support networks relative people with lower levels of educational attainment.

Our findings further revealed that the unemployed and urban residents were less associated with PMH relative to the employed and rural residents, respectively. Within the context of the COVID-19 pandemic, prior studies have established a positive relationship between deteriorating MH and financial instability or experience of economic hardship [23,36]. Aside from the fact that employment offers financial stability and increase access to healthcare, the work environment may provide opportunities for people with substance use challenges to access social support. Even though Canada operates universal healthcare, unemployed individuals may still encounter financial barriers to accessing available MH services, which can translate into feelings of helplessness, and increased levels of stress and anxiety. In their evaluation of barriers and cost-effective solutions to MH services in Canada, Moroz et al., [37] argued that in addition to excessive wait times and most people not knowing where to get help, cost remains a major barrier to help-seeking and service utilization. Nonetheless, given that employment guarantees a relatively stable source of income, it can promote stability and resilience, buffering against the negative effects of substance use on MH. This finding not only highlights the intersecting impact of employment on the MH of people with addiction challenges but also, the increased vulnerability of substance users with poor socioeconomic standing to poor MH outcomes. Also, although recent studies suggest that patients in urban areas are more likely to utilize healthcare facilities and services than their rural counterparts [38], within the context of substance use and MH, urban residents may experience poorer MH due to the high social fragmentation, which is often associated with feelings of isolation, loneliness, and MH disorders such as psychosis [39]. Moreover, while urban areas typically have more healthcare facilities and specialized services, they may also face higher demand and longer waiting times that can induce reluctance to seek help for substance use challenges. Addressing these disparities requires targeted interventions that improve access to MH services, reduce stigma, and address social and economic inequalities in urban settings.

The findings of this study should be taken in the light of some noteworthy limitations. First, the cross-sectional nature of this study limits the findings to only statistical associations. Secondly, while the use of unweighted data allows researchers to analyze the raw distribution of respondents as

 doi:10.20944/preprints202507.2489.v1

observed, which provide insights into the sample's characteristics directly, it is however important to highlight that since the survey design includes stratification, and possible oversampling of certain demographics, unweighted data may lead to biased estimates, especially in multivariate analyses where relationships between variables might be influenced by the sample's composition. Also, the responses of the study participants may be subject to social desirability bias given the sensitive nature of the topic. For instance, some participants may shy away from indicating their indulgence in substance use and the associated challenges. Notwithstanding, this study has made a significant contribution to the literature of substance use and MH, highlighting critical areas of urgent policy interventions. Vulnerable demographics such as younger individuals, those with lower levels of educational attainment, and the unemployed must be prioritized for timely harm reduction and recovery programs. This can be achieved by bolstering community-based MH resources, expanding access to MH and addiction or harm reduction services in underserved neighborhoods, and communities. It is equally important to foster collaboration across different healthcare sectors to dismantle systemic barriers and promote equitable access to care for all people with addiction challenges irrespective of their socioeconomic status. Strategies aimed at reducing stigma and barriers to substance-use help-seeking, must also consider providing culturally sensitive and affordable services. Overall, a multifaceted approach that addresses both substance-use challenges and MH needs, is crucial for promoting positive MH outcomes. Overall, addressing substance use problems and improving MH requires holistic, ongoing support that reduces stigma and improves access to timely and comprehensive MH services.

5. Conclusions

The findings suggest that individuals who experience unmet healthcare needs (UHNs) for substance use, uses non-prescription drugs use, engage in frequent (weekly or daily) cannabis use, or feel uncomfortable seeking help for substance use, are significantly less likely to report Positive Mental Health (PMH). These findings highlight the negative impact of both substance-use behaviors and barriers to care on mental well-being. Addressing UHNs and improving access to and comfort with seeking substance-use support may be critical for promoting better mental health outcomes.

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Abbreviations

The following abbreviations are used in this manuscript:

Mental Health	MH
Unmet Healp Needs	UHNs
Positive Mental Health	PMH
Public Use Microdata Files	PUMF
Canadian Perspectives Survey Series	CPSS

 doi:10.20944/preprints202507.2489.v1

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