# Does cannabis really influence FEP outcome negatively?

*Clairélaine Ouellet-Plamondon[1,3,7], Amal Abdel-Baki[1,3,5], Émilie Salvat [6], Stéphane Potvin[1,4], Luc Nicole[1,2,4]*

[1] Department of Psychiatry, Université de Montréal, Montréal, Qc, Canada; [2] Hôpital Louis-H. Lafontaine, Montreal,Qc, Canada; [3] Centre Hospitalier de l'Université de Montréal, Hôpital Notre-Dame, Montreal, Qc, Canada; [4] Centre de recherche Fernand-Séguin, Montreal, Qc, Canada; [5] Centre recherche CHUM, Montreal, Qc, Canada; [6] Université Antilles-Guyane, Pointe-à-Pitre; [7] Centre for Addiction and Mental Health, Toronto, On, Canada

clairelaine.ouellet-plamondon@umontreal.ca

## Introduction

Cannabis is the most commonly used illicit drug among patients with First Episode Psychosis (FEP)[1,2].

Different studies have concluded that substance use disorders (SUD) negatively influenced outcomes in FEP [3,4,5,6].

However, the effects of cannabis use disorder (CUD) alone are not clear. Polysubstance abuse is highly prevalent in cannabis users [4,7] or is sometimes not mentioned in previous studies [6]. It may have confounded the impact of cannabis.

## Objective

Our study examined the impact of different SUDs (alcohol, cannabis, psychostimulants) on symptoms, social functioning and service utilization at 1- and 2-year follow-up in a FEP sample.

## Methods

Participants:
Age 18-30
Admitted to early psychosis programs in Montreal, Canada, with a primary diagnosis of FEP
Untreated psychosis or treated less than 1 year prior to admission to FEP program

Ethics:
All subjects gave written informed consent. Project was accepted by hospital ethics and research committees.

Methodology:
Prospective 2-year longitudinal study
Data collected at admission and then annually by research interview and chart review

Study groups:
- No SUD
- Alcohol only
- CUD only
- Psychostimulant (included poly-SUD)
- Poly-SUD (2 or more SUD)

SUD assessment:
Diagnosis DSM-IV-TR
Drug Use Scale (DUS)
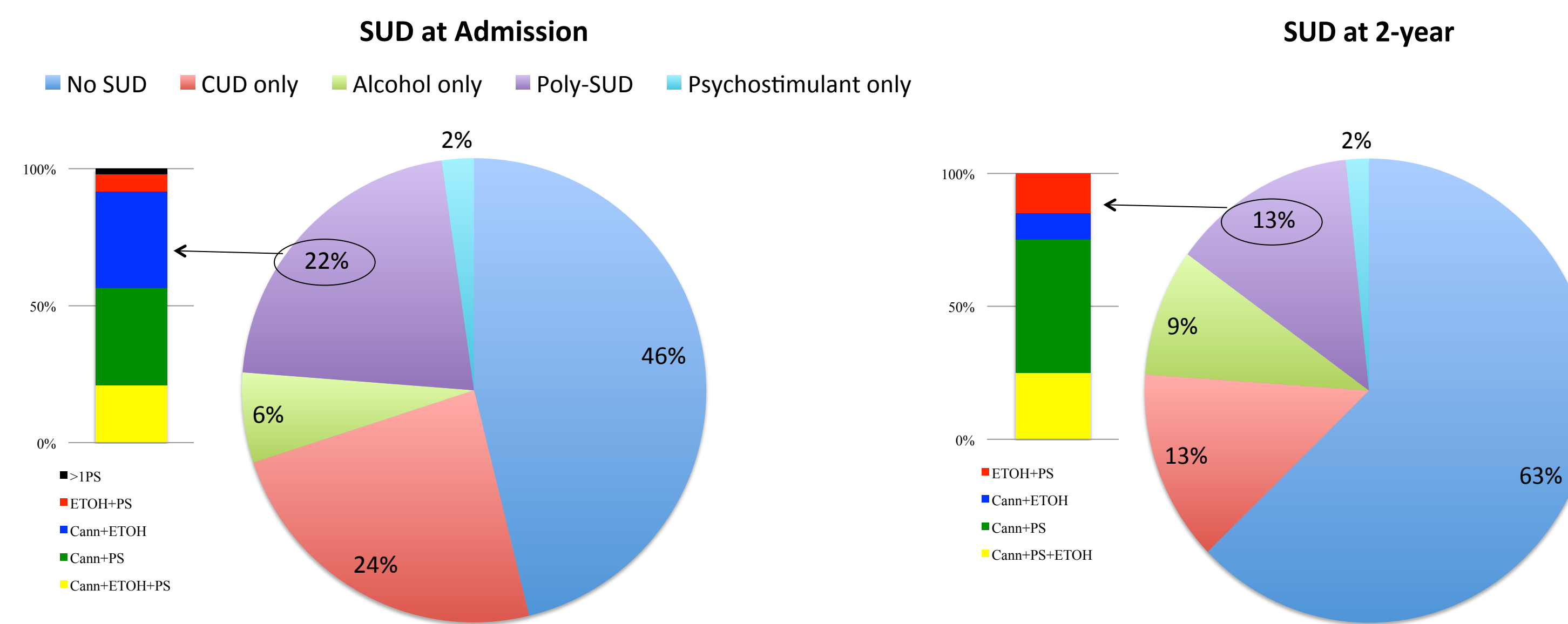Alcohol Use Scale (AUS)
Substances used

Characteristics at admission:
Sociodemographics, diagnosis, social functioning, symptomatology

Statistical analysis with SPSS v20
ANOVA for continuous variables and Pearson Chi square test for categorical variables

References

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6-Turkington A, Mulholland CC, Rushe TM, Anderson R, McCaul R, Barrett SL, Barr RS, Cooper SJ. Impact of persistent substance misuse on 1-year outcome in first-episode psychosis. (2009) Br J Psychiatry 195, 242–248.

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## Results



SUD at Admission — No SUD, CUD only, Alcohol only, Poly-SUD, Psychostimulant only

SUD at 2-year

Poly-SUD: 65% and 90% of admission and 2-year poly-SUD had psychostimulant (PS) SUD, respectively

No admission SUD status difference between lost to follow-up at 24 months N=32 (14.1%) compared to followed sample

### Baseline characteristics N =176

| | |
|---|---|
| Mean age | 23.0 |
| % Male | 83.0 |
| % Single | 88.1 |
| % Immigrants (1st and 2nd generation) | 45.7 |
| Years of education | 11.0* |

*Educational difference between groups: No SUD 11.5, CUD only 10.5, Poly-SUD 9,7 (p< 0.05)

## 2-year outcome: no SUD vs SUD

| | No SUD | | Alcohol only | | CUD only | | Psychostimulant | | Poly-SUD | |
|---|---|---|---|---|---|---|---|---|---|---|
| N= | 12mo **123** | 24mo **113** | 12mo **12** | 24mo **16** | 12mo **28** | 24mo **24** | 12mo **24** (includes 18 polySUD) | 24mo **21**(includes 18 polySUD) | 12mo **27** | 24mo **20** |
| PANSS positive* | 11.8 | 10.7 | 13.6 | 10.6 | 13.3 | **14.6** | **17.5** | **13.7** | **16.9** | 12.9 |
| PANSS negative* | 15.8 | 14.9 | 18.9 | 14.8 | 17.5 | 16.9 | **20.3** | **18.6** | **19.9** | **18.5** |
| PANSS general* | 26.6 | 25.0 | 27.9 | 24.0 | 28.0 | **30.2** | **33.0** | **30.9** | **32.7** | **30.7** |
| PANSS total* | 54.1 | 50.7 | 60.4 | 49.5 | 58.8 | **61.7** | **70.7** | **63.2** | **69.5** | **62.2** |
| CDS* | 2.9 | 2.5 | 3.4 | 1.9 | 3.0 | **4.8** | **4.4** | 4.0 | **4.7** | 4.1 |
| QoL* | 74.8 | 78.4 | 57.6 | 75.3 | 65.0 | **61.9** | **40.5** | **56.2** | **42.5** | **56.5** |
| SOFAS | 55.6 | 54.0 | 46.3 | 46.6 | 50.0 | 50.5 | 39.0 | 47.2 | **41.7** | 48.6 |
| GAF | 55.8 | 54.6 | **43.4** | **46.6** | **48.8** | **44.6** | **38.2** | **45.5** | **40.0** | **46.5** |
| Work or study % | 60.5 | 58.5 | 33.3 | 37.5 | 50.0 | 36.4 | **8.3** | **28.6** | 18.5 | **35** |
| Hospitalization at 2-year FU | 1.7 | 2.1 | 2.2 | **3.4** | 1.9 | 2.7 | **3.1** | **4.2** | 2.9 | **4.0** |
| Hospit. days at 2-year FU | 71.7 | 90.0 | 76.5 | 103.1 | 88.9 | 121.6 | **117.0** | **188.4** | 110.3 | 178.8 |
| Emergency visit | 0.16 | 0.19 | 0.58 | **0.75** | 0.25 | 0.46 | 0.17 | **0.52** | 0.19 | **0.55** |
| Good compliance to med % | 83.2 | 91.5 | **75.0** | 87.5 | 75.0 | **72.7** | 79.2 | **81.0** | 79.8 | **80.0** |
| Treatment order | 7.6 | 10.4 | 8.3 | 18.8 | 14.3 | 9.1 | 16.7 | **33.3** | 18.5 | **40.0** |
| Depot medication % | 9.2 | 12.3 | 16.7 | 13.3 | 19.2 | 27.3 | **37.5** | **61.9** | **29.6** | **50.0** |

In RED = P value <0.05 between No SUD and SUD

* only patients accepting research interview; 24months: No SUD=83, alcohol only=11, CUD only=12, Poly=13, Psychostimulants=13

## Discussion

Cannabis is the most common SUD in our FEP cohort. Half of CUD present polysubstance use disorder.

Drug misusers have more symptoms compared to the no-SUD group: persistent CUD is particularly associated with depressive symptoms, while psychostimulant misuse is associated with negative symptoms.

All substances are associated with lower functioning (GAF) but drugs have a greater negative impact on most measures at 2-year. Persistent CUD is the only group that deteriorates from Year 1 to Year 2 (symptoms and functioning). Psychostimulants and poly-SUD are associated with bad symptomatic and functional outcome early in the course of illness (from the 1st year of treatment), persisting over time.

Psychostimulants have a big impact on service utilization (higher). Hospitalization can be considered an indirect measure of illness severity and complexity, of our health system's difficulty to address this complex comorbidity and of the burden this poses to the health system and families. Community treatment orders and long-acting antipsychotic medication are more frequently used in psychostimulant and poly-SUD. This probably reflects lower compliance rates for oral medication in that group, and clinicians who notice negative consequences from the comorbid disorders are more likely to be using long-acting medications (from the 1st year of treatment) or legal means (during the 2nd year) to improve treatment compliance. This probably contributes to the observed improvement between 1-year and 2-year follow-up.

All SUD should be an important intervention target, because it is very prevalent in FEP and significantly worsens outcomes. Attention should be given to cannabis misusers since their condition seems to worsen over time and to psychostimulant misusers since they continue to have poorer outcome and a high utilization of hospitalization and emergency services.