

## GENDER-SPECIFIC ASSOCIATIONS BETWEEN PSYCHOLOGICAL DISTRESS AND DRUG-RELATED RISK BEHAVIOURS AMONG PEOPLE WHO INJECT DRUGS IN MONTREAL, CANADA

Minoyan N<sup>1,2</sup>, Høj SB<sup>1</sup>, Jutras-Aswad D<sup>1,3</sup>, Vlad D<sup>1,2</sup>, Martel-Laferrrière V<sup>1,4</sup>, Sylvestre MP<sup>1,2</sup>, Bruneau J<sup>1,5</sup>

<sup>1</sup>University of Montreal Hospital Research Centre (CRCHUM), <sup>2</sup>Department of social and preventive medicine, School of Public Health, University of Montreal, <sup>3</sup>Department of Psychiatry and Addiction, Faculty of Medicine, University of Montreal, <sup>4</sup>Department of microbiology, infectiology and immunology, University of Montreal, <sup>5</sup>Department of Family and Emergency Medicine, Faculty of Medicine, University of Montreal.

### Background:

Mental health problems are common and understudied among people who inject drugs (PWID). Studies suggest increased vulnerability to both psychological distress and hepatitis C virus (HCV) infection among female relative to male PWID. Behavioural responses to distress may depend on gender and may differentially contribute to HCV-related harms in men and women. This study estimated gender-specific associations between psychological distress and i) binge drug injection and ii) sharing of injection material among PWID.

### Methods:

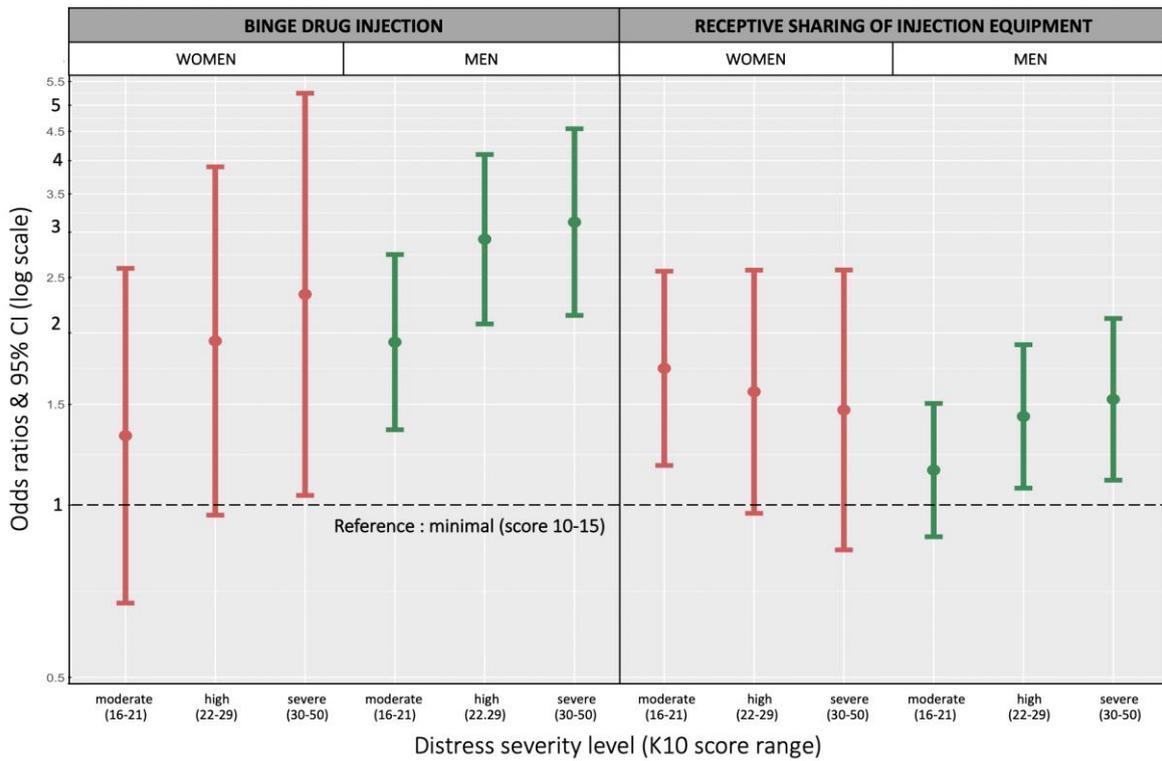
Data were drawn from HEPCO, a longitudinal cohort study involving three-monthly interviews with active PWID in Montreal, Canada. Past-month psychological distress was assessed with the Kessler K10 scale, categorized as low (score 10-15), moderate (16-21), high (22-29), severe (30-50). Binge was defined as injecting large quantities of drugs until participants could no longer continue (past three months). Sharing was defined as injection with needles/equipment previously used by someone else (past three months). Generalized estimating equations were fit, adjusting for known determinants of drug-related harms, and stratifying by self-reported gender.

### Results:

805 individuals (82% male) provided 8158 observations (2011-2017). High/severe levels of distress were common and more frequent among women (55% vs 37%). Among men, we observed incremental odds of both binge and sharing across levels of psychological distress (adjusted odds-ratio [95% CI] relative to low distress, for binge: moderate=1.93 [1.35-2.74], high=2.92 [2.07-4.10], severe=3.12 [2.15-4.55]; for sharing: moderate=1.15 [0.88-1.51], high=1.43 [1.07-1.91], severe=1.53 [1.11-2.12]). Associations with binge were less pronounced among women but nevertheless exhibited a graded pattern (moderate=1.32 [0.67-2.59], high=1.94 [0.96-3.90], severe=2.34 [1.04-5.25]). Sharing was highest among women reporting moderate distress (aOR=1.73 [1.17-2.56], high=1.58 [0.97-2.57], severe=1.47 [0.84-2.58]).

### Conclusion:

Psychological distress was differentially associated with injection-related risk behaviours among men and women who inject drugs, with strong effects for binge among men. Assessment of distress may provide novel prevention opportunities among PWID. Further investigation into gender-related differences may inform intervention strategies.



**Disclosure of Interest Statement:**

Jutras-Aswad D receives study material from Insys Therapeutics for a trial unrelated to the current work. Martel-Laferrière V reports grants from Gilead and Merck (unrelated to the current work); Bruneau J holds research grants and receives advisor fees from Gilead Sciences and Abbvie (unrelated to the current work).