

## **Longitudinal associations of anxiety and depression among people who primarily smoke methamphetamine**

ZOE DUNCAN<sup>1</sup>, KEITH SUTTON<sup>1</sup>, BERNADETTE WARD<sup>1</sup>, REBECCA KIPPEN<sup>1</sup>, KASUN RATHNAYAKE<sup>3</sup>, BRENDAN QUINN<sup>1,3,4</sup>, MATTHEW HICKMAN<sup>5</sup>, PAUL AGIUS<sup>1,3</sup>, REBECCA JENKINSON<sup>1,3,4</sup>, PAUL DIETZE<sup>1,2,3</sup>

<sup>1</sup>Monash University, Melbourne, Australia

<sup>2</sup>Curtin University, Melbourne, Victoria, Australia

<sup>3</sup>Burnet Institute, Melbourne, Victoria, Australia.

<sup>4</sup> Australian Institute of Family Studies, Melbourne, Australia

<sup>5</sup>University of Bristol, Bristol, UK

Presenter's email: zoe.duncan1@monash.edu

**Introduction:** Methamphetamine users experience anxiety or depression at high rates. Much of the existing literature is cross-sectional, involving participants recruited from drug treatment services or criminal justice settings. There is a paucity of research examining associations between methamphetamine use and anxiety. This study examined longitudinal patterns of anxiety and depression in community-recruited cohort of methamphetamine smokers

**Method:** Data were derived from baseline and 6-monthly follow-up surveys conducted between August 2016 until March 2020. More than 800 participants from metropolitan and non-metropolitan areas of Victoria were recruited for the prospective 'VMAX' study. Outcomes of interest—anxiety and depression—were measured using the Generalized Anxiety Disorder (GAD)-7, and the Patient Health Questionnaire (PHQ)-9 instruments. Frequency of methamphetamine use was measured by self-reported number of days per week in the past month. Generalised linear mixed models were used to examine the association between frequency of methamphetamine use and 'moderate-to-severe' PHQ-9 and GAD-7 scores.

**Results:** More than 60% of participants experienced depression and/or anxiety at baseline, and depression and anxiety were highly correlated. Results indicated that increasing number of days per week of methamphetamine use was associated with increased odds of experiencing either moderate-to-severe depression (OR=1.20,  $p<0.001$ ) or anxiety (OR=1.19,  $p<0.001$ ) over the course of the study.

**Discussion:** Longitudinal associations of depression and anxiety and methamphetamine use emphasize the need for integrated models of care. Further research is needed to examine longer-term longitudinal trends and predictors of health service use for mental health issues amongst those experiencing moderate-to-severe depression and/or anxiety.

**Disclosure of Interest Statement:** The VMAX study was established with a grant from the Colonial Foundation and is now funded by the National Health and Medical Research Council (NHMRC, 1148170). PD is supported by an NHMRC Senior Research Fellowship. PD has received investigator-driven funding from Gilead Sciences and Indivior for work unrelated to this study.