

Exploring polysubstance use patterns and associated health and wellbeing outcomes among gender and sexuality diverse (LGBTQA+) young people: a latent class analysis

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Introduction: Although LGBTQA+ young people use substances at higher frequencies, greater intensities, and earlier ages, relative to their cisgender, heterosexual peers, little is known about polysubstance use among these communities: concurrent use of multiple substances. This study explored typologies of concurrent polysubstance use among LGBTQA+ young people in Australia.

Methods: Using data from *Writing Themselves In 4* (n=6,418; M_{age}=17.3), latent class analyses using full information likelihood estimation were conducted to determine distinct patterns of concurrent polysubstance use, namely current regular alcohol use, cigarette use, and vape use; and past six-month use of dissociative drugs, cannabinoids, psychedelics, opioids, depressants, stimulants, empathogens, and anti-depressants or anti-psychotic medications. Demographic characteristics, mental health, truancy/workdays missed, subjective happiness, drug use concerns, and support seeking behaviours were compared across classes.

Results: Concurrent polysubstance use was characterised as 'Curious' (n=5,021, 82.5%; mostly low on all), 'Kicking back' (n=793, 13.0%; prevalent alcohol and dissociatives use), or 'Thrill-seekers' (n=270, 4.4%; use of most substances, particularly dissociatives, stimulants, vaping, alcohol, depressants, and cannabinoids). Those in the 'Thrill-seekers' class reported increased odds of being trans and aged older than those in the 'Curious' class. Those in the 'Kicking back' class were at significantly increased odds of being older aged than those in the 'Curious' class. There were no statistically significant differences between class membership and mental health, truancy/workdays missed, subjective happiness, drug use concerns, or support seeking outcomes.

Discussions and Conclusions: Nearly one in five LGBTQA+ young people in Australia engage in high levels of polysubstance use, with older trans young people at particularly increased risk. High rates of concurrent use of alcohol with dissociative drugs such as ketamine and nitrous oxide, stimulants with depressants, and alcohol with stimulants were observed among classes characterised by higher levels of polysubstance use. No differences in mental health, truancy/workdays missed, happiness, drug use concerns, or support seeking behaviours between classes of polysubstance users were observed.

Implications for Practice or Policy: Clinicians and harm reduction practitioners should be equipped to handle polysubstance use concerns in an LGBTQTA+ affirming, non-judgemental manner given the high baseline rates of mental health difficulties, substance use concerns, and professional drug support needs of LGBTQA+ young people.

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