



Full length article

## Typology of new psychoactive substance use among the general Australian population

Rachel Sutherland<sup>a,\*</sup>, Amy Peacock<sup>a,b</sup>, Amanda Roxburgh<sup>a</sup>, Monica J. Barratt<sup>a,c,d</sup>, Lucinda Burns<sup>a</sup>, Raimondo Bruno<sup>b</sup>

<sup>a</sup> National Drug and Alcohol Research Centre, University of New South Wales, Sydney, NSW, 2052, Australia

<sup>b</sup> School of Medicine (Psychology), Faculty of Health, University of Tasmania, Hobart, TAS, 7001, Australia

<sup>c</sup> National Drug Research Institute, Faculty of Health Sciences, Curtin University, Perth, WA, 6845, Australia

<sup>d</sup> Behaviours and Health Risks Program, Burnet Institute, 85 Commercial Rd, Melbourne VIC 3004, Australia

### ARTICLE INFO

#### Keywords:

New psychoactive substances

NPS

Synthetic cannabinoids

Typology

Latent class analysis

### ABSTRACT

**Aim:** The aim of this study was to examine the typology of Australian illicit drug consumers to determine whether those who use new psychoactive substances (NPS) differ from those using other illicit substances.

**Methods:** Data were from the 2013 National Drug Strategy Household Survey, a representative population study; analyses were limited to participants reporting past year illicit drug use (including NPS;  $n = 3309$ ). Latent class analysis identified groups based on past year substance use, and a weighted multivariable, multinomial regression model was used to examine characteristics associated with group membership.

**Results:** Six consumer typologies were identified: *cannabis consumers* (46%), *pharmaceutical consumers* (21%), *ecstasy and cocaine consumers* (19%), *amphetamine and cannabis consumers* (7%), *polysubstance consumers* (6%), and *inhalant consumers* (2%). Sixteen participants (total sample: 0.07%; NPS consumers: 5.7%) reported exclusive NPS use. Synthetic cannabinoid receptor agonist use was highest among *amphetamine and cannabis consumers* and *polysubstance consumers*; other NPS use was highest among *polysubstance consumers*. *Polysubstance consumers* were younger than all other groups, and more likely to engage in dangerous activities while under the influence of substances, inject drugs and report hazardous alcohol consumption. *Amphetamine and cannabis consumers* were more likely to report trouble ceasing their drug use.

**Conclusion:** We found no distinct profile of NPS-only consumers; however, NPS use was a marker for more problematic patterns of use. Our findings suggest that specialised NPS interventions or harm reduction messages may not be required in the Australian context; rather, they could be based upon existing responses to drug use.

## 1. Introduction

Over the past decade, the number and range of substances collectively referred to as ‘new psychoactive substances’ (NPS) has increased dramatically. NPS are defined by the European Monitoring Centre for Drugs and Drug Addiction (EMCDDA) as substances which do not fall under international drug controls but which may pose a public health threat (European Monitoring Centre for Drugs and Drug Addiction, 2016b). However, there are a number of problems with this definition (e.g., mere psychoactivity is assumed to be a public health threat; Barratt et al., 2017), and in practicality the term ‘NPS’ has come to include drugs that have previously not been well-established in recreational drug markets, or that are not well documented. In 2016, over 600 NPS were being monitored by the European Union (European Monitoring Centre for Drugs and Drug Addiction, 2016a), of which 70%

were detected in the past five years (European Monitoring Centre for Drugs and Drug Addiction, 2016b).

Despite the rapid growth of the NPS market, and associated concerns of widespread use, prevalence appears to be relatively low amongst adult general population samples (i.e.,  $\leq 1.2\%$ ; UK Government Home Office, 2017; Australian Institute of Health and Welfare, 2017; Palamar et al., 2015). The use of these substances is thought to be concentrated amongst existing illicit drug consumers (Moore et al., 2013; Sutherland et al., 2016), and other disadvantaged groups (e.g., homeless, prisoners, mentally ill, people who inject drugs) (European Monitoring Centre for Drugs and Drug Addiction, 2017b; Joseph et al., 2017; Manseau et al., 2017; Rácz et al., 2016; Tarján et al., 2017). Concerns remain, however, that ‘novice’ consumers may initiate NPS use, particularly given use of the internet as a means of supply. Indeed, the argument that NPS appeal to novice consumers has

\* Corresponding author.

E-mail address: [rachels@unsw.edu.au](mailto:rachels@unsw.edu.au) (R. Sutherland).

been used to advocate for their prohibition, regardless of their harm profile, on the premise of preventing normalisation of NPS use and transition into other illicit drug use (Intergovernmental Committee on Drugs, 2014).

Our ability to address such concerns is limited by the fact that the comparability of NPS consumers with other illicit drug consumers has not been properly explored. Moreover, it remains unclear whether there is a distinct group of exclusive NPS consumers (i.e., people who use NPS but no other illicit substances), or whether there are particular groups of illicit drug consumers that report elevated rates of NPS use. In order to examine these questions, data from samples where inclusion is not based on illicit substance use, and where people may be consuming a broad range of substances, are required. General population data provide an important opportunity to answer this research question, with latent class analysis (LCA) a particularly suitable method for investigating whether distinct subtypes or classes of NPS consumers exist.

In identifying NPS consumers, it is critical to explore their relative demographic and risk profile. Previous studies have shown that people who report NPS use are typically younger, more likely to be male, report higher levels of poly drug use, younger age of drug initiation, more problematic drug use (e.g., bingeing), and are more likely to report online purchasing behaviours relative to illicit drug consumers who do not use NPS (Bonar et al., 2014; Bruno et al., 2012; Lawn et al., 2014; Palamar, 2015; Palamar and Acosta, 2015; Emmanuel and Attarad, 2006). However, these studies are generally based on samples of people who use illicit drugs, limiting their capacity to identify unique NPS groups (including people using NPS but no other illicit substances).

As such, this study uses data from a general population sample to:

- 1) Examine the typology of Australian illicit drug consumers to determine if there is a distinct group of exclusive NPS consumers, and if not, determine which consumer ‘type’ is most likely to use NPS.
- 2) Compare profiles across these subgroups, based on demographics and risk behaviours.

This information will improve our understanding of the profiles of NPS users, allowing for the development of more targeted harm reduction messages.

## 2. Method

### 2.1. Study design and participants

This paper uses data from the 2013 National Drug Strategy Household Survey (NDSHS; for full protocol details, see Australian Institute of Health and Welfare, 2014). The NDSHS, conducted on a triennial basis, collects data from the Australian residential population, and employs a multistage stratified sampling methodology designed to provide a close-to-random sample to obtain data on drug and alcohol use in the Australian population over 14 years of age. In 2013, 23,855 respondents participated in the survey, with analyses based on a subset of participants who reported past year use of a range of licit drugs used for non-medical purposes (e.g., opioid analgesics) and/or illicit drugs, including NPS ( $n = 3309$ ; 13.9%).

### 2.2. Measures relevant to the current study

#### 2.2.1. Licit and illicit drug use

Participants were asked about their lifetime and past twelve-month use of a range of licit and illicit substances, including tobacco, alcohol, pharmaceutical drugs used for non-medical purposes (i.e., pain killers/analgesics, tranquilisers/sleeping pills, steroids, methadone or buprenorphine, other opiates/opioids), methamphetamine, cannabis, heroin, cocaine, hallucinogens, ecstasy, ketamine, GHB and inhalants. The 2013 NDSHS was the first in the survey series to include questions about NPS. Specifically, participants were asked about their lifetime

and past 12 month use of “synthetic cannabis/cannabinoids (e.g., K2, Spice, Kronic)” and “novel psychoactive substances (e.g., mephedrone, methylene, BZP, 2C-B, DMT, MDAI, MDPV).” Hence, for the purposes of this paper, NPS will be split into two categories: synthetic cannabinoids (hereafter referred to as synthetic cannabinoid receptor agonists; SCRA) and other NPS.

#### 2.2.2. Demographics and mental health

The 2013 NDSHS survey collected a range of demographic information, including age, gender, income (AUD), employment and educational status. Relative socio-economic advantage and disadvantage was measured using the Socio-Economic Indexes for Areas (SEIFA), developed by the Australian Bureau of Statistics (Australian Bureau of Statistics, 2013). From this index, areas can be divided into quintiles, with the lowest quintile representing the most disadvantaged areas and the highest quintile representing the most advantaged. This SEIFA quintile variable was included in analyses as an area-level indicator of socio-economic status (SES), with the bottom two quintiles combined to identify the most disadvantaged quintiles.

Participants were also administered the Kessler 10 (K10) Psychological Distress Scale to assess psychological distress (Kessler et al., 2003). The K10 is a 10-item screening tool utilizing a five-point response scale (1 ‘none of the time’ to 5 ‘all of the time’); a cut-off score of  $\geq 22$  (score range 10–50) was used to measure high to very high psychological distress (Andrews and Slade, 2001).

#### 2.2.3. Alcohol and drug-related risk behaviours

The 2013 NDSHS asked participants how many days of work, school, technical and further education (TAFE) or university they had missed because of their alcohol use, and how many days they had missed because of their use of drugs other than alcohol, in the past three months. Responses to this variable were recoded into a binary variable with yes/no response options (i.e., did the participant miss any days of work, school, TAFE or university because of their alcohol and/or drug use).

They were also asked if, in the last 12 months, they had done any of the following activities while under the influence of or affected by alcohol or illicit drugs: went to work; went swimming; operated a boat; drove a motor vehicle; operated hazardous machinery; created a public disturbance or nuisance; caused damage to property; stole money, goods or property; verbally abused someone; or physically abused someone.

Participants who had used non-medicinal pain killers/analgesics, tranquilisers/sleeping pills, methamphetamine, cannabis, heroin, tobacco, steroids, buprenorphine, cocaine, hallucinogens, ecstasy or inhalants were asked if, in the past 12 months, they could not stop or cut down on their use of these substances even though they wanted to or tried to. Participants who had not used these substances were coded as ‘no’.

The Alcohol Use Disorders Identification Test Consumption questions (AUDIT-C) was administered as a validated screening measure of hazardous patterns of alcohol consumption (Bradley et al., 2007; Bush et al., 1998). This 3-item scale assesses quantity and frequency of use, with higher scores (range 0–12) indicating more hazardous use. Participants were categorised based on a cut-off indicative of high risk drinking (scores of 9 and above; Harris et al., 2010). Participants who had not consumed alcohol in the past year were given a score of ‘0’.

Participants were also asked if they had injected any drugs (where injection was the non-intended route of administration for pharmaceutical medicines) in the last 12 months.

### 2.3. Statistical analysis

To address the first aim, latent class models (one to eight classes) were estimated using past year drug and alcohol use. Specifically, the models were based on past 12 month use of the following drugs:

Download English Version:

<https://daneshyari.com/en/article/7502872>

Download Persian Version:

<https://daneshyari.com/article/7502872>

[Daneshyari.com](https://daneshyari.com)