

# Have we seen a change in psychedelic use among people who regularly use ecstasy and other illicit stimulants?

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## Key Findings:

- There is increasing research and popular culture interest in psychedelics.
- There is no evidence for any change in the overall extent or frequency of use of psychedelic drugs among participants in the Ecstasy and Related Drugs Reporting (EDRS) system in the past decade.
- However, there has been a shift in the type of psychedelics used, with an increase in LSD use and a decline NPS psychedelic use over time.
- There is no association between psychedelic use and psychological distress levels among participants in the Ecstasy and Related Drugs Reporting System.

## Introduction

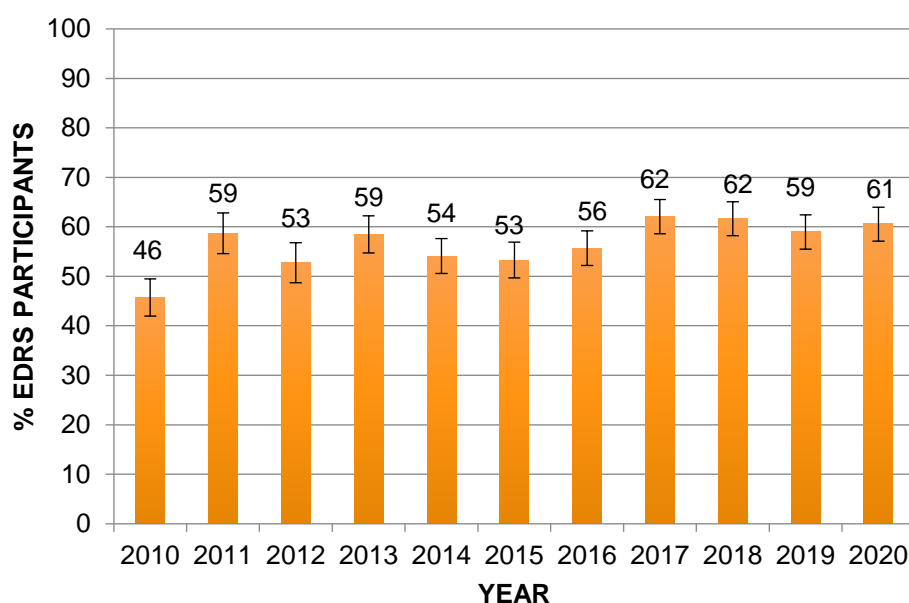
- There has been rapidly increasing interest in psychedelics internationally in recent years, with decriminalisation of some substances in this class in the United States, establishment of research centres that focus on psychedelics, and expanded industry attention (1).
- Recent reviews have identified an emerging evidence base for psilocybin and other psychedelics in treatments for mental health conditions such as PTSD and treatment-resistant depression. Some drugs in this class have been designated by the US Food and Drug Administration as “breakthrough therapies” for these disorders; and the Australian Government has recently dedicated 15 million dollars toward clinical trials examining the treatment of mental illness with psychedelic drugs (2).
- In Australia, the National Drug Strategy Household Survey identified a small but significant increase in psychedelic use in the Australian general adult population, rising from 1.0% in 2016 to 1.6% in 2019. It should be noted that rates have been in a similar range across the past decade (3).
- One of the many potential reasons for the apparent increase in psychedelic use may be self-treatment of mental health conditions. The 2020 Global Drug Survey found almost 6% of their sample (6500 of 110000) reported self-medicating with psychedelic drugs (4).
- In addition, there is increasing interest in ‘microdosing’, that is, regular use of subthreshold doses of psychedelics with an aim to improve mood or cognition (5).
- In this bulletin we aimed to examine if there was any evidence of change in the use of psychedelic drugs among participants in the Ecstasy and Related Drugs Reporting System (EDRS) between 2010 and 2020, and if there was evidence for the very frequent use that would be suggestive of ‘microdosing’.

## Method

- Data from the national 2010-2020 EDRS surveys were examined (see [here](#) for more details). Frequency of any psychedelic use was calculated by summing days use of each psychedelic type in the previous 180 days, and thus may be an overestimate (i.e., it is possible that people may have used two different psychedelics on the same day).
- Psychedelic use was categorised into groups of ‘any’; ‘natural’ (psychedelic mushroom, mescaline, ayahuasca); ‘NPS’ (Novel Psychoactive Substances: 2C-I, 2C-B, Do-x, 5-MeO-DMT, NBOMes, 5-MeO-DMT, 4-AcO-DMT, among others); DMT; and LSD.

## Results

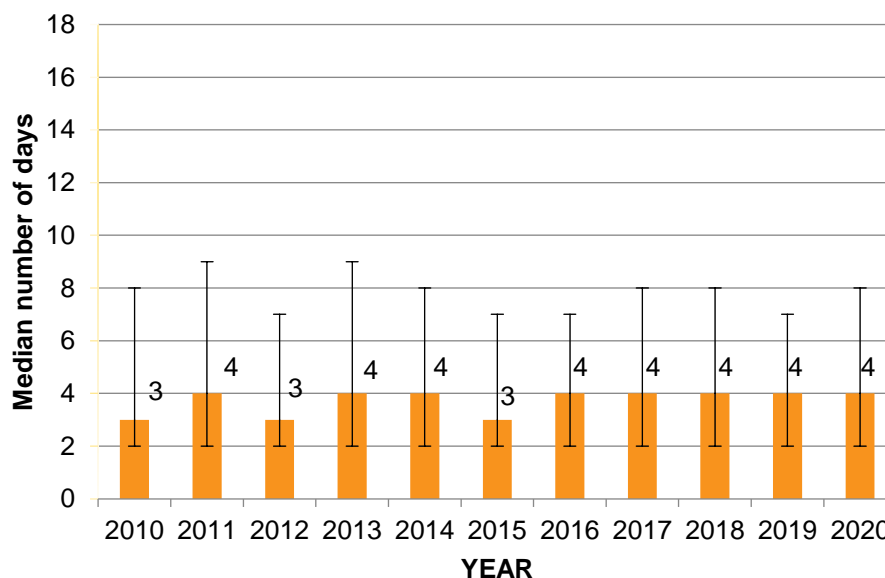
**Figure 1. Proportion of EDRS participants, nationally, reporting past six month use of any type of psychedelic 2010-2020 (error bars are 95% CI)**



Notwithstanding the single year of 2010, there is little evidence for any change in the overall use of psychedelics among EDRS participants in the past 10 years. The percentage of participants reporting any recent psychedelic use has remained around 60% in recent years.

**Figure 2. Median days of use, in the last 180 days, of any type of psychedelic 2010-2020 (error bars are 25<sup>th</sup> and 75<sup>th</sup> percentiles)**

On average, use of psychedelics has remained infrequent over the past decade, at a median of 4 days in the previous six months. There is little evidence for any change in the overall frequency of use.



Y axis has been reduced to 18 days to improve visibility of trends

**Figure 3. The frequency of use of any type of psychedelics among EDRS participants, nationally, 2010-2020**

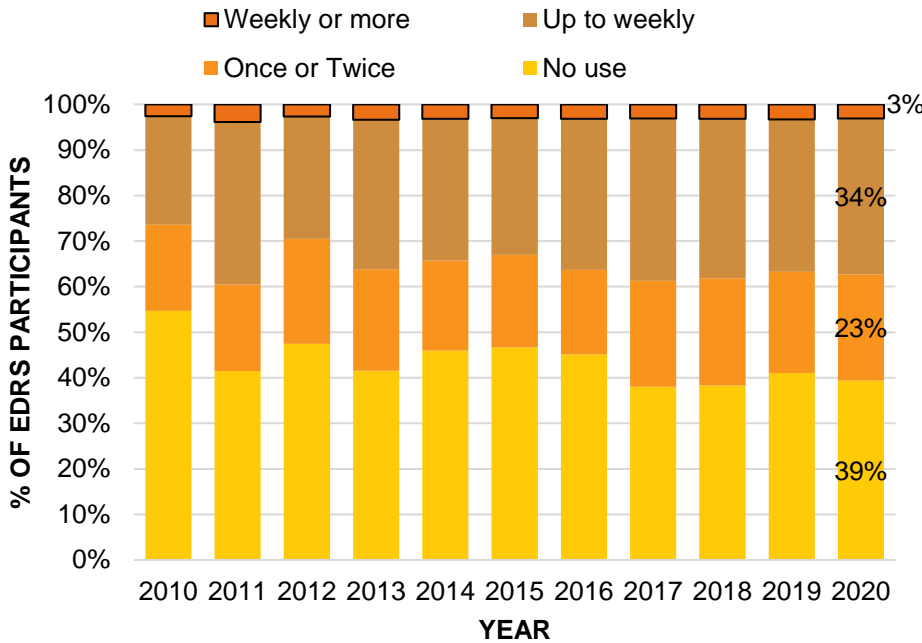
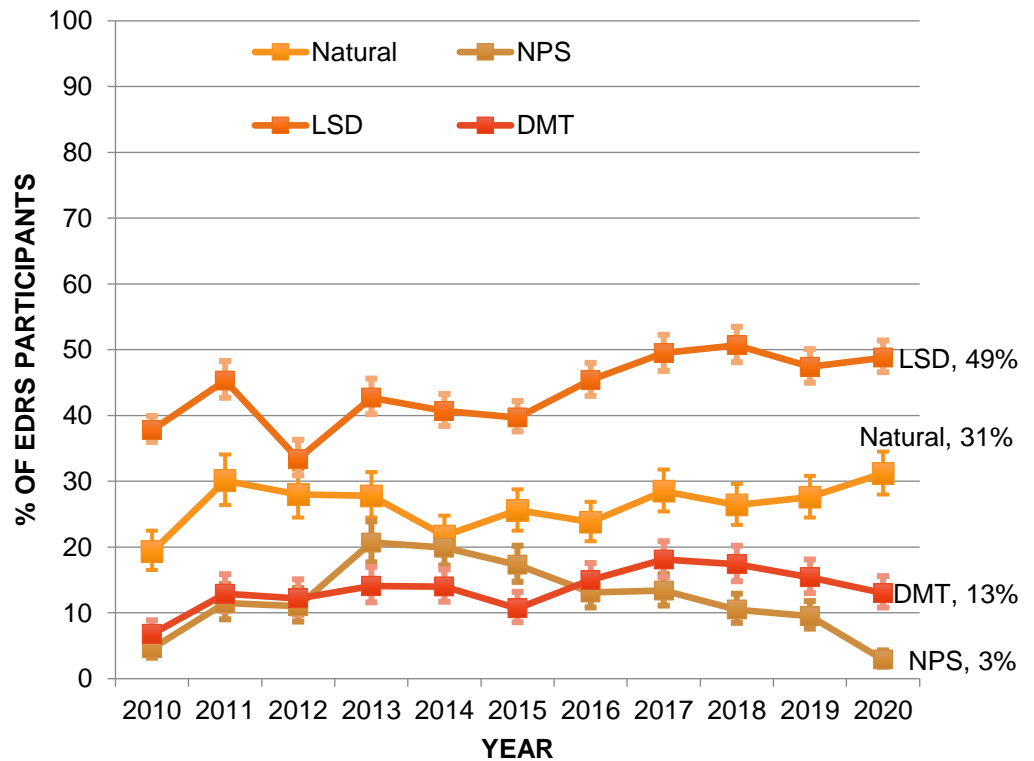


Figure 3 further shows that there is little evidence of any change in frequency of psychedelic use. Around one-third of those who report past six month psychedelic use only do so once or twice in a six month period; less than 5% use weekly or more, and less than 5 people in a decade have reported daily use.

**Figure 4. Use of particular psychedelic types among EDRS participants, nationally, 2010-2020 (error bars represent 95%CI)**

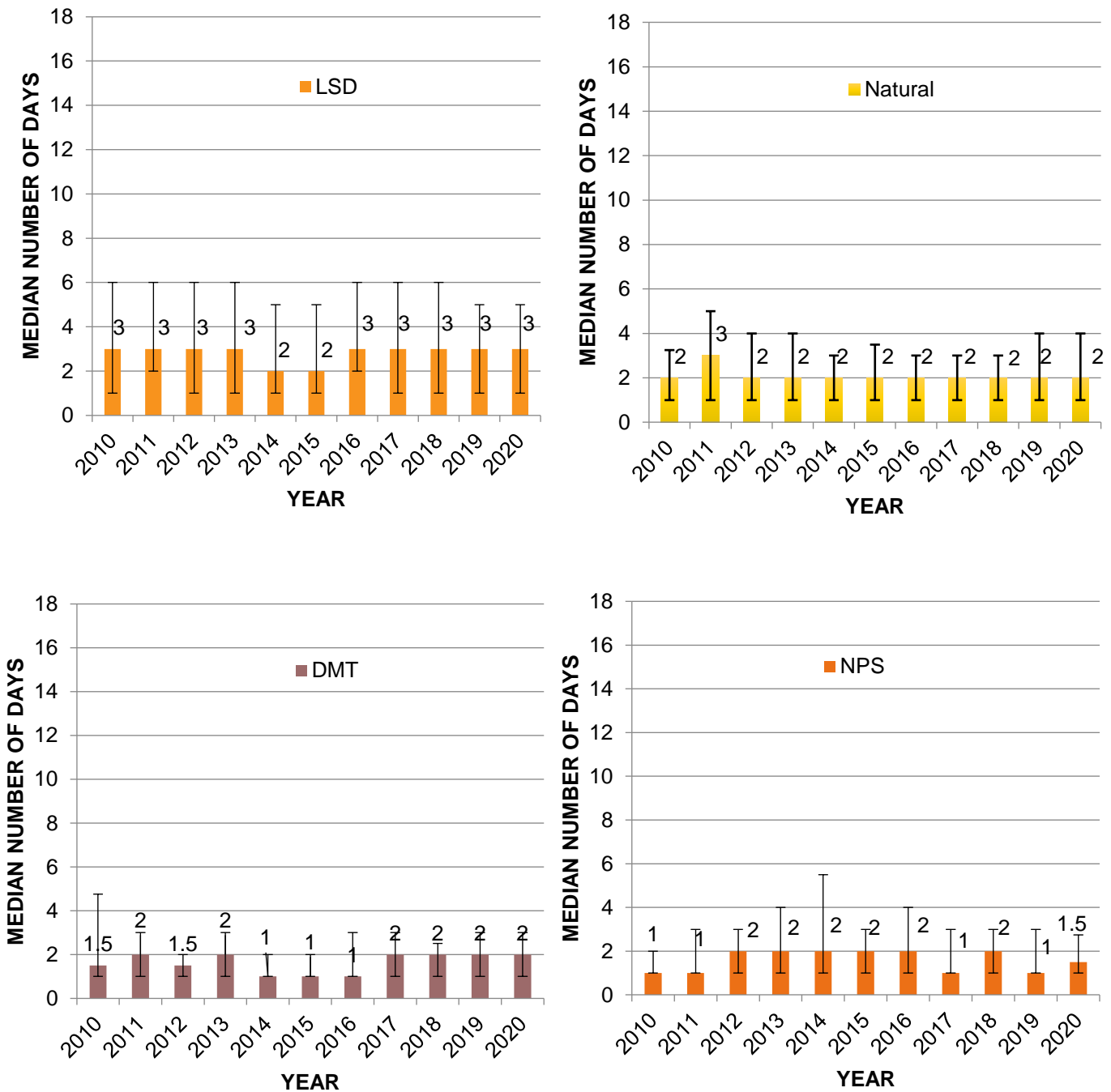
There have been some changes in the types of psychedelics used. Recent use of LSD has increased from around 40% in the first half of the past decade to around 50%.

Use of psychedelic NPS has declined from a high of 20% in 2013 to 3% in 2020.



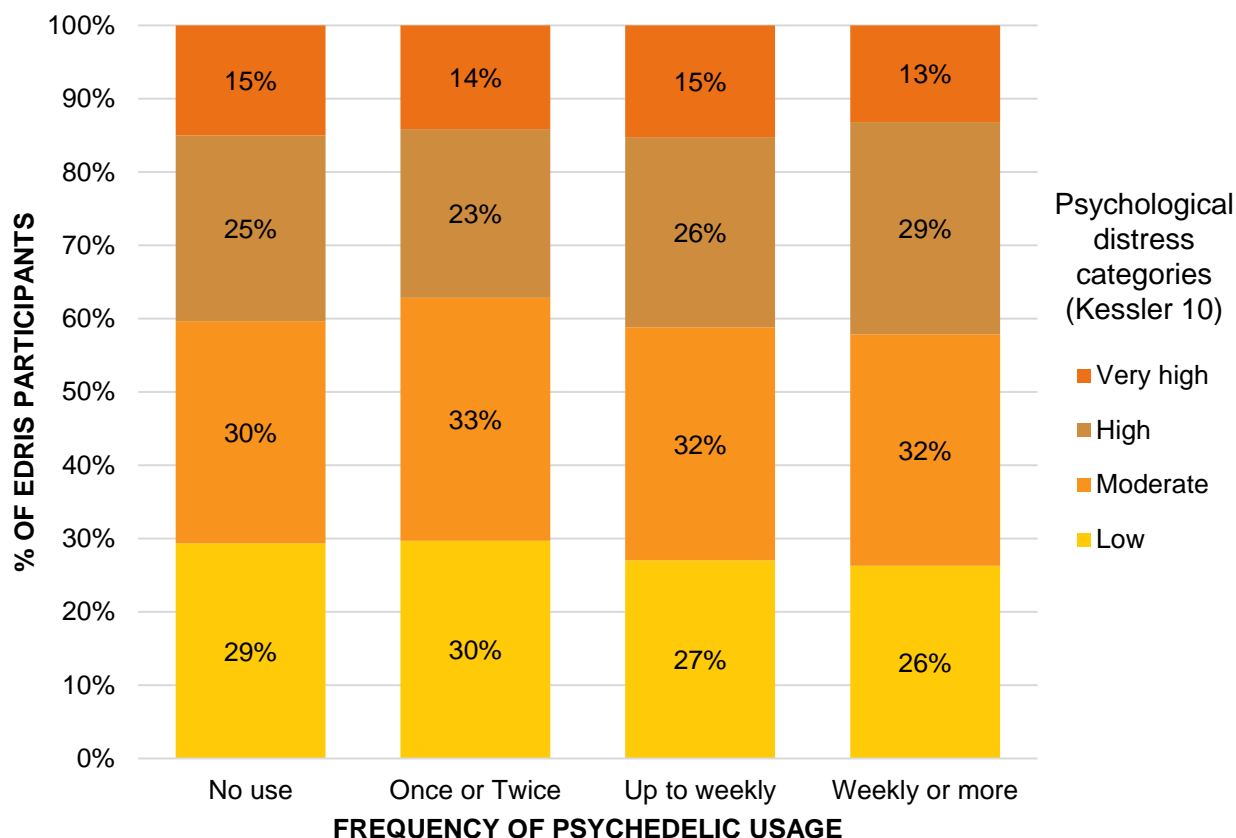
There is no evidence of meaningful changes in how often EDRS participants reported using any of the different groupings of psychedelics over the past decade.

**Figure 5. Median days of use, in the last 180 days, of particular psychedelic types 2010-2020** (error bars are 25<sup>th</sup> and 75<sup>th</sup> percentiles)



Y axis has been reduced to 18 days to improve visibility of trends

**Figure 6. Frequency of psychedelic usage categorized by Kessler-10 Psychological Distress categories.**



The EDRS uses the Kessler-10 screening tool to assess psychological distress. Participants in the ‘high’ and ‘very high’ categories are likely to be experiencing moderate to severe mental health problems. Those in the ‘very high’ category are highly likely to be experiencing a diagnosable depression or anxiety condition.

There is no evidence for any relationship between the extent to which participants used psychedelics and their mental health as assessed by the Kessler-10:  $\chi^2_{n=2396}(9) = 4.29, p=0.892$ . Likewise, there was no significant correlation between total scores on the Kessler-10 scale and days of use of psychedelics ( $r=0.01, p=0.570$ ).

### Conclusion

- Despite increasing attention to psychedelics and small increases in their use among the general population, there is no evidence for any overall change in the extent or frequency of psychedelic use among our samples of people who regularly use ecstasy and other illicit stimulants.
- In these samples, there is no evidence for any relationship between the extent of psychedelics use and mental health, although it is important to note that we did not explicitly ask whether participants were using psychedelics to treat or improve their mental health.

## References

1. Kuypers KPC. (2020). The therapeutic potential of microdosing psychedelics in depression. *Therapeutic Advances in Psychopharmacology*, 10, 1-15.
2. Aday, JS., Bloesch, EK., Davoli, CC. (2020). 2019: A year of expansion in psychedelic research, industry, and deregulation. *Drug Science, Policy and Law*, 6, 1-6.
3. Reiff, CM., Richman, EE., Nemeroff, CB., Carpenter, LL., Widge, AS., Rodriguez, CI., Kalin, NH., McDonald, WM.; et al. (2020). *American Journal of Psychiatry*, 177, 391-410.
4. Australian Institute of Health and Welfare (2020). National Drug Strategy Household Survey 2019. Canberra: AIHW.
5. Winstock, AR., Timmerman, C., Davies, E., Maier, L., Rhuparris, A., Ferris, JA., Barratt, MJ., Kuypers, KPC. (2021). Global Drug Survey (GDS) 2020 Psychedelics Key Findings Report.

## Participating Researchers and Research Centres

- Antonia Karlsson, Julia Uporova, Daisy Gibbs, Rosie Swanton, Olivia Price, Roanna Chan, Professor Louisa Degenhardt, Professor Michael Farrell and Dr Amy Peacock, National Drug and Alcohol Research Centre, University of New South Wales, New South Wales;
- Amy Kirwan, Cristal Hall, Dr Campbell Aitken and Professor Paul Dietze, Burnet Institute Victoria;
- Tanya Wilson and Associate Professor Raimondo Bruno, School of Psychology, University of Tasmania, Tasmania;
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