



MDMA/ecstasy use, psychological distress and suicidality in the US adult population

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Introduction

- MDMA and psilocybin-assisted therapies are currently being studied for their potential in treating mental health disorders (Doblin et al., 2019).
- The results have been promising, and there is a lot of hype around the subject, possibly leading to some people trying to treat themselves with these substances even though they are not yet an available treatment option.
- There have been discussions whether the use of these substances outside clinical context poses dangers to mental health, as is often claimed.
- Previous population studies have shown that classic psychedelics, including psilocybin, are associated in reduced mental distress and suicidality in the US adult population, after sociodemographic factors, risk-taking tendency and other substance use has been adjusted (Krebs & Johansen, 2013; Johansen & Krebs, 2015; Hendricks, Thorne, Clark, Coombs & Johnson, 2015; Ajantaival, 2018).
- A similar investigation has not yet been done to the same extent on MDMA.
- Although there is research suggesting MDMA use being associated with higher likelihood of suicidality (Kim, Fan, Liu, Kerner & Wu, 2011), these studies have often failed to demonstrate that this is specifically linked to MDMA and not to other polydrug use.

Methods

- The dataset used in the study is National Survey on Drug Use and Health (NSDUH) from the years 2016–2019, excluding the respondents under 18 from the data.
- Multivariate logistic regression analysis was used to investigate the odds ratios for MDMA and other drug use groups.
- The predicted variables were past month psychological distress measured by K6 scale, using the cutoff point of ≥ 13 , and past year suicidality, defined as suicidal thinking, suicide plans and suicide attempts.
- The main predictors were lifetime use of MDMA and three recency groups: Those who had used MDMA within a month, more than a month ago but less than a year ago, and more than a year ago.
- Adjusted variables in the main models were sociodemographic factors, risk-taking tendency and other lifetime illicit/non-medical drug use. Two additional models were also created, where some of the other drug groups were also adjusted for recency.

Results

- Lifetime use of MDMA was associated with reduced likelihood of past month psychological distress, past year suicidal thinking and past year suicide plans. The odds ratio in the model predicting past year suicide attempt had confidence intervals including 1 and could thus not be interpreted.
- In the two additional models predicting past month psychological distress and past year suicidal thinking, the odds ratios for recency groups of MDMA, cannabis, methamphetamine and pain killers were compared. While the odds ratios increased the more recent the drug use had been in case of cannabis, methamphetamine and pain killers, this did not apply to MDMA.
- The results of the study suggest that MDMA use is not associated with increased likelihood of past month psychological distress or past year suicidality. The higher prevalence of mental health problems among the people using MDMA is more likely linked to other drug use than MDMA.

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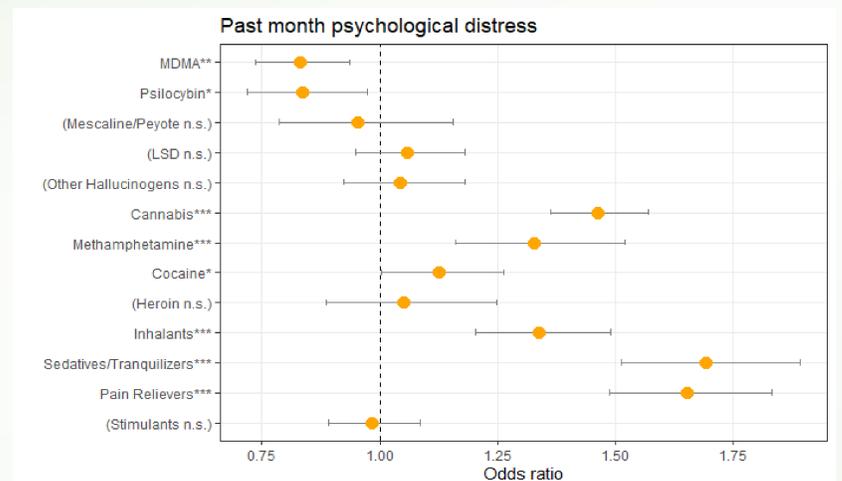


Figure 1. Odds ratio (weighted) with 95% confidence intervals for lifetime use of MDMA in the model predicting past month psychological distress, compared to odds ratios of other adjusted substances, adjusted for sociodemographic factors and risk-taking tendency

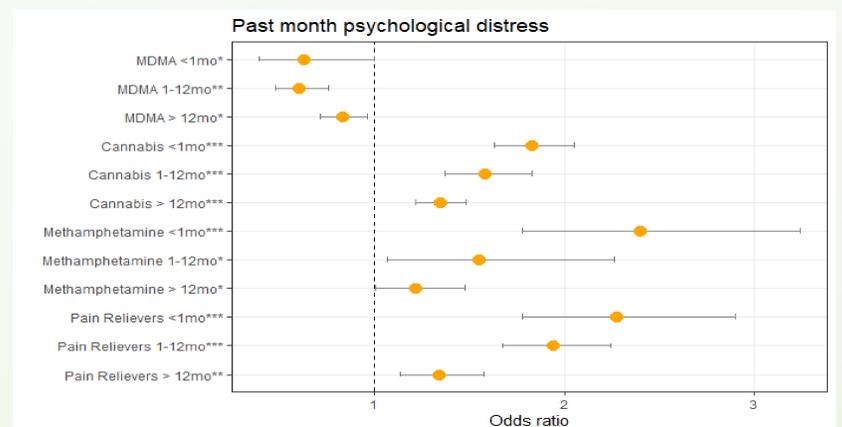


Figure 2. Odds ratio (weighted) with 95% confidence intervals MDMA recency groups, compared to recency groups of cannabis, methamphetamine and pain relievers in a model predicting past month psychological distress, when sociodemographic factors, risk-taking tendency, lifetime use of psilocybin, LSD, mescaline/peyote, sedatives/tranquilizers, inhalants, other hallucinogens and stimulants, and recency of heroin and cocaine use was adjusted. Content of the figure explained in the text.

Discussion

- Based on the results, MDMA does not seem to be an independent risk factor for mental health problems.
- Previous research has suggested MDMA to be one of the least dangerous substances commonly used (Bonomo et al., 2019; Nutt, King & Phillips, 2010).
- A meta-analysis of 25 years of research on MDMA toxicology does not suggest normal doses (less than 3 mg/kg) of MDMA would be particularly dangerous for physical health (Pantoni & Anagnostaras, 2019).
- WHO (2017) has made a statement about the current drug laws being problematic for human rights and discriminating against people already in vulnerable positions.
- It has been argued that the freedom to alter one's consciousness, also referred to as cognitive liberty, would be a human right based on the freedom of thought, conscience and religion defined in the Universal Declaration of Human Rights, Article 9 (Walsh, 2016).
- The results of the study combined with previous studies give reason to question the ethicality of the current drug laws regarding the prohibition of MDMA and psychedelic use.