

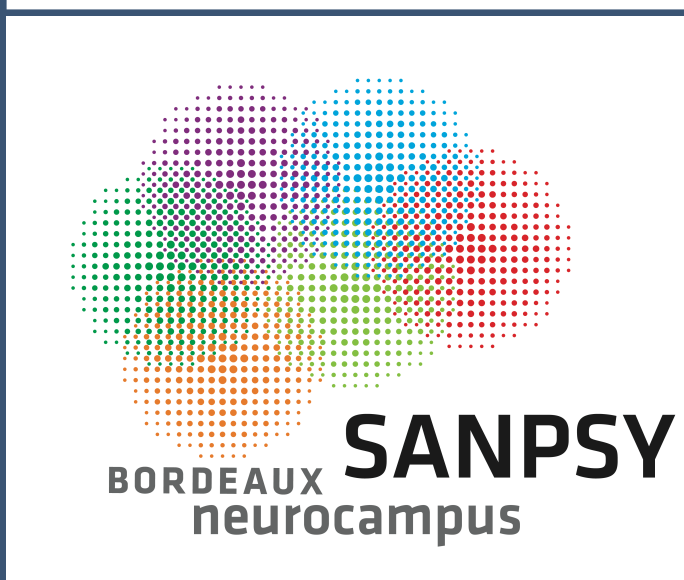
Nitrous Oxide use in a sample of French Medical students

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Background

- Nitrous Oxide gas (N2O) is used for medical sedation and widely for industrial purposes
- Diversion for rewarding and anxiolytic properties
- Medicine students seem particularly exposed to N2O use
- N2O problematic /harmful use remain to investigate
- N2O regular use could be associated with work-related stress / other substances problematic use

Objectives

- To describe N2O use by medical residents students
- To assess association between N2O use and work-related stress, and other substances problematic use

Method

- Cross-sectional survey
- Sample: French Medicine students in internship (Bordeaux, France)
- All contacted for online questionnaire between Nov. 2018 and Jan. 2019 ; Anonymous survey

→ Lifetime/Current use of N2O, Tobacco, Alcohol, Cannabis, Opiates, Stimulants

Current use : last 12months ; Regular use : ≥ 1 per month

→ Addiction screening with the CAGE questionnaire (adaptation for substances ; 2 yes or more /4 = problematic use)

→ Current Work-related stress assessed with the *Internal Medicine Residency Stress Scale* (IMRSS)

Results

Response rate 26.1% (165/633) ; 68.5% women, average age 26 y.o

N2O use & N2O problematic use

NO2 use and adverse effects prevalences

Category	Percentage
Never used N2O	23,0%
Past N2O users	27,9%
Current N2O / no adverse effects	31,5%
Currents N2O / with adverse effects	17,6%

Lifetime N2O users: 77.0% (n=127) ; 64.6% Females

→ 67.5% (n=86) became aware of N2O diverted use by their professional colleagues

Current N2O users: 49.1% (n=81) ; 65.4% Females

→ Main motivations: festive (96.3%), relaxation (16.2%)

→ 35.8% reported adverse effects

Falls (15.0%), physical injury (11.8%), confusion (7.1%)

Less frequent: paresthesia, headache

Current N2O regular users: 4.8% (n=8) ; 62.5% Females

→ 62.5% reported adverse effects

→ Minority (37.5%) acknowledged eventuality of irreversible injury/death

Problematic use screening: <1% (n=1)

N2O use and screening for other substances problematic use

Problematic use screening:

- Alcohol 23.0% (n=38)
- Tobacco 17.7% (n=29)
- Cannabis 4.8% (n=8)
- Stimulants, Cocaine, Opiates <1% (n=1)

N2O regular users more screened as problematic user for at least 1 other substance compared to N2O non-users / N2O irregular users (p<0.05)

N2O use and work-related stress

- IMRSS Score: m=25.3 (SD: 6.1)
- No link between N2O frequency of use and work related stress (p>0.05)

Conclusion

- N2O experimentation and current use widely prevalent among French medical students
- Addiction screening was rare (<1%), however adverse effects and lack of knowledge were important
- N2O regular use associated with other substances problematic use

→ Information and harm reduction policy are needed for N2O use

→ N2O regular use could be a trigger for care professionals to screen for problematic use of other substances

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