

## EPP0839

## Epidemiological patterns of new psychoactive substances use in Tunisian school adolescents, 2021

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**Introduction:** The emergence of New Psycho-active Substances (NPS) such as Synthetic cannabinoid and cathinone, represents a challenging issue for drug policy globally. In order to set up new adjusted measures to limit this phenomenon extension, objective epidemiologic indicators are requested.

**Objectives:** We aimed to determine the prevalence of Synthetic cannabinoid and cathinone consumption in Tunisian adolescents by gender and regional distribution.

**Methods:** Data from the Mediterranean school survey on alcohol and other drugs (MedSPAD III-2021) were used. Based on three-stage stratification sampling method, high school teenagers in first and second grades of secondary education, were enrolled. Data collection was performed using a self-administered standardized questionnaire. We examined weighted prevalence estimates of NPS use at least once in a lifetime (Synthetic cannabinoid and cathinone) by gender and regional distribution. Epi data software was used for data entry and all statistical analysis were performed with STATA software.

**Results:** The survey included 6201 adolescents with a mean age of 16.8 years and a sex ratio female/male of 1.5. Synthetic cannabinoid's use was reported by 1.9%, 95% CI [1.57-2.39] of students, with statistically significant difference between boys (4.1%) and girls (0.6%),  $p$ -value $<10^{-4}$ . This consumption was the highest in Tunis the capital city, the center-east and the north-east (2.7%, 2.2% and 2% respectively). As for synthetic cathinone's use, it was reported by 0.36% 95%CI [0.24-0.56] of our study sample, with statistically significant difference between boys (0.8%) and girls (0.8%),  $p$ -value $<10^{-4}$ .

**Conclusions:** Our study highlighted an emerging use of NPS among high school students with significant male predominance. Further research on NPS epidemiology is, hence, needed to reinforce evidence-based management strategies aiming at fighting this phenomenon. Sensitization of decision makers to control accessibility, and increasing awareness among adolescents' close family / school-staff environment regarding this issue, are strongly recommended.

**Disclosure of Interest:** None Declared

## EPP0840

## Long-term exposure to air pollution and traffic noise and incidence of mental disorders: a large administrative cohort of adults

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**Introduction:** Air pollution is related to a global increase in mortality and morbidity. The literature on the adverse effects on mental disorders is still limited.

**Objectives:** This study aims to investigate the associations between air pollutants and traffic noise with incidence of different categories of mental disorders and drug prescriptions in a large cohort administrative cohort.

**Methods:** We enrolled 1,739,277 individuals 30+ years living in Rome at 2011 census, and followed them up until 31<sup>st</sup> December 2019. We excluded subjects with prevalent mental disorders at baseline to evaluate the incidence of schizophrenia, bipolar, anxiety, personality and substance use disorders, as well as prescriptions of antipsychotics, antidepressants and anticonvulsants. We assigned annual average concentrations of fine particulate matter (PM<sub>2.5</sub>), nitrogen dioxide (NO<sub>2</sub>), Black Carbon (BC), ultrafine particles (UFPs) and noise exposure to baseline residential addresses. We applied Cox regression models with adjustment for individual and area-level covariates.

**Results:** This study identified variable numbers of incident cases, from 1,280 cases for personality disorders to 200,549 for antidepressants. Each interquartile range increase in PM<sub>2.5</sub> (1.13µg/m<sup>3</sup>) was associated with a hazard ratio (HR) of 1.07 (95% confidence interval: 1.017, 1.127) for schizophrenia spectrum disorder, 1.135 (1.086, 1.186) for depression, 1.097 (1.030, 1.168) for anxiety disorders and 1.112 (1.030-1.200) for substance use disorders. Positive associations were also detected for the other exposures and with the three categories of drug prescriptions. In two-exposure models, PM<sub>2.5</sub>, UFPs and noise remained associated with schizophrenia spectrum disorders, depression and antidepressant drugs use. The effects were higher in the age group 30-64 than in the 65+.

Sensitivity analyses generally yielded similar results

**Conclusions:** Long-term exposure to air pollutants and noise was associated with increased risks of schizophrenia spectrum disorders, depression and anxiety disorders. The associations with prescriptions of specific drugs increase the credibility of the results.

**Disclosure of Interest:** None Declared

## EPP0841

## 1-year above-recommendation screen use and internalizing and externalizing behaviours in French children aged 3 to 14 years

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**Introduction:** The context of the COVID-19 pandemic has changed the daily life of families and children. Screen exposure was increased during this period to maintain social relationships, work remotely, and occupy leisure time.

**Objectives:** To explore the association of continued above-recommendation screen use for one year since May 2020 with behaviour problems in the summer of 2021 in children aged 3 to 14 years.

**Methods:** Data came from the French EpiCov cohort study, and were collected in May 2020 and at first (Autumn 2020) and second follow-up (Summer 2021) among 1,089 participants with children aged 3 to 14. Children had a 1-year above-recommendation screen use if their daily mean time exceeded recommendations at the three follow-up times (one hour, for children aged 3-5, two for the older ones). Behaviour problems were assessed using the Strengths and Difficulties Questionnaire (SDQ) and valid cut-offs for Internalizing (emotional or peer problems) and Externalizing (conduct problems or hyperactivity/inattention) problems completed in summer 2021. Data were analysed using adjusted logistic regression.

**Results:** 1-year above-recommendation screen use was not associated with internalizing problems (OR [95% CI]: 1.20 [0.90-1.59]). Regarding the subscales, it was associated with a higher risk of peer problems (1.42 [1.04-1.95]). A higher risk of externalizing problems was found only in 11-14-year-olds (1.63 [1.01-2.63]), especially conduct problems in 11-14-year-olds (1.91 [1.15-3.22]) but not in other age groups.

**Conclusions:** This study found that maintaining screen time beyond recommendations for 1 year since the onset of the pandemic was associated with peer problems in children aged 3-14 years and externalizing and conduct problems in 11-14 years. Despite this very specific context, exposure to screens is not trivial. If this situation were to occur again, we would have to anticipate, with prevention messages, by keeping schools open.

**Disclosure of Interest:** None Declared

## EPP0842

### Smoking status trajectories, intergenerational socioeconomic mobility and depression: Preliminary results from 107,734 French adults (18 to 75 years) of the CONSTANCES cohort

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**Introduction:** Cigarette smoking prevalence is significantly higher among people with mental health problems than among the general population. Smoking accounts for much of the reduction in life expectancy associated with mental illness, why the high co-occurrence of smoking and mental health illness is a major public health concern. Persons belonging to socioeconomical disadvantaged groups have higher risk of mental health conditions and also higher smoking rates.

**Objectives:** In this study we aim to examine smoking trajectories among adult smokers between 2012 and 2020. Furthermore, we aim to investigate differences in smoking trajectories by adult depression by taking into consideration participants intergenerational socioeconomic mobility (ISEM).

**Methods:** Analyses were based on data from CONSTANCES, a French general population cohort conducted from 2012 to 2020. In total were 107,734 participants included after exclusion of never smokers. Depression was measured by the CES-D scale, and

depression was classified with a score  $\geq 16$ . ISEM is based on childhood (maternal and parental occupational grade) and adult socioeconomic position (SEP), and low ISEM includes those with low SEP as child and adult and high ISEM those with consistent high SEP. Group-based trajectories modelling (GBTM) was used to determine smoking status trajectories. To address the association between ISEM and smoking trajectory class we used multinomial logistic regression with former smokers as reference class adjusted for depression, household income, sex and age.

**Results:** We identified five smoking trajectories 1) Former smokers (56.6%), 2) Long-term smokers (26.4%), 3) Intermediate smokers (3.3%), 4) Early quitters (5.0%) and 5) Late quitters (8.7%). Preliminary results from multinomial logistic regression showed that persons with low ISEM had higher odds of depression (OR [95%CI] =1.91 [1.77;2.06]) than those with high ISEM. Participants with low ISEM had higher odds of being long-term smoking than former smokers compared to those with high ISEM (ORa [95%CI]=1.55 [1.43;1.67]). Furthermore, those with low ISEM had lower odds of being in any of the other smoking trajectory groups vs. former smokers compared to those with high ISEM (ORa [95%CI]=0.82 [0.69;0.97]) for intermediate smokers, ORa [95%CI]=0.75 [0.66;0.85] for early quitters, and ORa [95%CI]=0.78 [0.70;0.87] for late quitters).

**Conclusions:** Preliminary results showed an association between ISEM and smoking trajectories in our study. Persons with low ISEM are more likely to be long-term smokers. Future analysis should consider the effect of depression as a mediating factor on the association between ISEM and smoking trajectories.

**Disclosure of Interest:** None Declared

## EPP0843

### Associations between placental DNA methylation and emotional and behavioral outcomes in preschoolers: insights from the EDEN Mother-Child Cohort study

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**Introduction:** Behavioral (externalizing) and emotional (internalizing) problems were showed to be associated with the prenatal environment. Changes in placental DNA methylation was identified as a relevant potential mechanism of such association.