

**Methods:** A descriptive study that includes patients admitted to the Hospital del Mar in Barcelona for all medical-surgical reasons and attended by the specific addiction psychiatry consultation service between January 2016 and October 2021. Sociodemographic and clinical data are collected including the history of consumption and the diagnosis of dual disorder. Chi-square test was used for comparison between groups.

**Results:** The sample was 1796 patients (Women: 345. Mean age: 50.3 years; SD: 12.6). 43.7% of the sample presented DD, with axis 1 disorders being the most frequent. There was an association of DD to factors as: being woman (54 vs 41.2%  $p < 0.001$ ), HIV positive serologies (54 vs 42.7%  $p < 0.001$ ), being homeless (49 vs 31.7%  $p < 0.001$ ) and cocaine consumption compared to other substances (53.4 vs 39.8%  $p < 0.001$ ).

**Conclusions:** In our sample, almost half of patients had DD. The representation of women was significantly lower, however they presented a higher proportion of DD. In this study we describe an association of DD with other biopsychosocial problems, and further studies are necessary to determine in which sense they are related and optimize patient care.

**Disclosure:** No significant relationships.

**Keywords:** Addiction; dual disorder; liaison

## Child and Adolescent Psychiatry 2 / Neurodevelopmental Disorders

### O0050

#### Use of ADHD Medication Among Danish Children and Adolescents from 2010-2020 - A Nationwide Study

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**Introduction:** To ensure rational drug use, there is a need to continuously monitor the use of ADHD medication among children and adolescents.

**Objectives:** To describe the use of ADHD medication among Danish children and adolescents from 2010-2020.

**Methods:** Using the Danish national healthcare registries, we extracted data on filled prescriptions of ADHD medication (including methylphenidate, atomoxetine, guanfacine, dexamphetamine, and lisdexamphetamine) among children (age 6-12 years) and adolescents (age 13-17 years) between 2010-2020. We examined the annual incidence rate and prevalence proportion of ADHD drug use, and the proportion of children and adolescents having an ADHD diagnosis when initiating ADHD medication.

**Results:** From 2010-2020, the incidence followed a u-shaped trend with an incidence rate of 4.9/1,000 children and 4.4/1,000 adolescents in 2010, decreasing to 3.2/1,000 children and 3.0/1,000 adolescents in 2013, and rising to 4.9/1,000 children and 4.8/1,000 adolescents in 2020. The prevalence for children showed a similar trend, shifting from 17/1,000 in 2010, to 15/1,000 in 2016, and

peaking at 19/1,000 children in 2020. However, among adolescents the prevalence increased steadily from 19/1,000 in 2010 to 29/1,000 in 2020. 67% of children and 53% of adolescents initiating ADHD medication had an ADHD diagnosis.

**Conclusions:** After an initial decline in incidence rates of ADHD medication use among Danish children and adolescents, there has been a rise in use the last five years. The same trend applied for the prevalence among children, whereas the prevalence among adolescents increased steadily over the entire period. More than half of children and adolescents initiating ADHD medication were diagnosed with ADHD.

**Disclosure:** No significant relationships.

**Keywords:** children and adolescent; drug utilization; nationwide; adhd

### O0051

#### Use of hypnotic drugs among Scandinavian children, adolescents, and young adults

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**Introduction:** Hypnotic drug use in children and adolescents is widely debated.

**Objectives:** To describe use of hypnotic drugs (melatonin, z-drugs and sedating antihistamines) among 5-24-year-old Scandinavians during 2012 to 2018.

**Methods:** Aggregate-level data from public data sources in Sweden, Norway and Denmark. We calculated annual prevalence (users/1000 inhabitants) stratified by sex, age group and country. Quantity of use (Defined Daily Dose (DDD)/user/day) was estimated for Norway and Denmark.

**Results:** Melatonin was most frequently used, with an increase from 2012 to 2018 in all countries. Sweden presented the highest rise (7 to 25/1,000) compared to Denmark (6 to 12/1,000) and Norway (10 to 20/1,000). The increase was strongest for females and 15-24-year-olds. Melatonin use was twice as common for males under age 15 years, and slightly more common for females thereafter. The annual prevalence of sedating antihistamine use doubled from 7 to 13/1,000 in Sweden, whereas it was more stable in Norway and Denmark, reaching 8/1,000 and 3/1,000, respectively. Z-drug use decreased in all countries, lowering to 4/1,000 in Sweden and Norway in 2018 and 2/1,000 in Denmark. The quantity of hypnotic use in Norway and Denmark was 1 DDD/user/day for melatonin, as compared to 0.1-0.3 for z-drugs and antihistamines.

**Conclusions:** There is an increasing use of melatonin and sedating antihistamines among Scandinavian children, adolescents and young adults. The increase is more pronounced in Sweden compared to Norway and Denmark. This Scandinavian discrepancy could reflect variation in frequency of sleep problems or national variation in clinical practice or health care access.

**Disclosure:** No significant relationships.

**Keywords:** pharmacoepidemiology; Child and adolescent; melatonin; drug utilisation

O0053

### White matter microstructure associated with the range of attentional and impulsive performance in school-aged children

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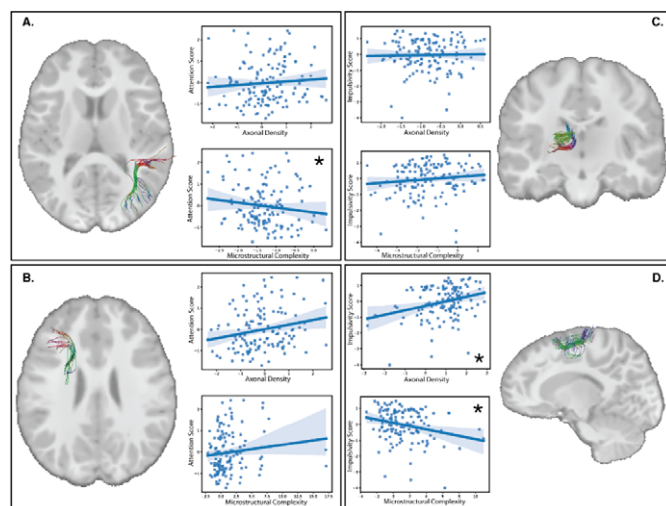
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**Introduction:** Inhibition capabilities have been shown to be a strong predictor of social and educational life outcomes (Mischel & Ebbesen, 1970; Shoda et al., 1990). Inhibition capabilities have an enormous impact on attention and impulsivity (Bari & Robbins, 2013). These two executive functions are associated with numerous psychiatric disorders but are not well understood in terms of white matter (WM) connectivity (Puiu et al., 2018). Novel techniques and statistical approaches in neuroimaging bring us closer to a biologically sustained model.

**Objectives:** This research aims to: 1) identify WM connections associated with attention/impulsivity performance and 2) characterize the differences in WM microstructure associated with the variation of the performance.

**Methods:** 157 children (GESTE cohort, 8-12 years, 27 Dx ADHD, 2 Dx ASD) with  $b=1500\text{mm}^2/\text{s}$ , 2mm isotropic dMRI acquisitions were included. Tractography was performed with TractoFlow pipeline (Theaud et al., 2020). Dimensionality reduction of diffusion metrics yielded two components: microstructural complexity (DTI Metrics, AFD & NuFo) and axonal density (AFD\_fixel) (Chamberland et al., 2019). Attention/impulsivity were evaluated with the CPT3. Multivariate linear regression was performed in python.

**Results:** Lower microstructural complexity was associated with poorer attentional performance on regions of the parietal lobe to the occipital gyrus (P-O,  $p=0.044$ ,  $R^2=0.14$ , Figure 1.) and the Broadman's area 8 to area 6 (SF8-SF6,  $p=0.002$ ,  $R^2=0.12$ , Figure 1.). Lower axonal density was associated with a less impulsive pattern on SF8-SF6 ( $p=0.001$ ,  $R^2=0.13$ , Figure 1.). Results remained significant when removing children with an ADHD or ASD diagnosis.



**Figure 1.** Multivariate linear regression analysis (adjusted for age, sex, laterality & IQ) between the WM microstructure components and attention/impulsivity score (reverse scoring) on connections - **A)** Inferior parietal lobe (area 40) to middle occipital gyrus, **B)** Orbital gyrus (area 12/47) to dorsal dysgranular insula, **C)** Right ventromedial putamen to right caudal temporal thalamus, **D)** Superior frontal (area 8) to superior frontal (area 6). \*  $p < 0.05$ . RGB color-coding: red for right to left direction, green for anterior to posterior direction and blue for superior to inferior direction.

**Conclusions:** We identified underlying difference in WM microstructure that may be associated with the variation in attention/impulsivity performance in school-aged children.

**Disclosure:** No significant relationships.

**Keywords:** Diffusion MRI; Attention/Impulsivity; White matter (WM); Pediatric

O0054

### ADHD and Intellectual Disability: using ADHD medication

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**Introduction:** Mental disorders and ADHD in people with ID are higher than in the general population. Clinicians may be reluctant to diagnose ADHD in people with ID. They could be denied effective treatment.

**Objectives:** The purpose of the study was to ascertain antipsychotic use in people with ID before and after the a diagnosis of ADHD.

**Methods:** A casenote review in an ID service for adults with ADHD. Data collected on psychotropic use before and after the diagnosis.

**Results:** Forty-eight adults with ADHD-ID were identified. 38(79%) were male and 10(21%) were female. 19 to 58 years of age. Four (8%) had mild ID; 44 (92%) had moderate to severe ID. 27(56%) had anxiety, mood disorders or psychosis. 21(44%) had ADHD only. Challenging behaviour was reported in 24 (50%) of cases. Thirty-three (68%) used psychotropic medication prior to the diagnosis of ADHD and after the diagnosis. Post-diagnosis, 20(60%) continued to use antipsychotic medication indicating the elimination of antipsychotic use in 13(40%) of people. The level