

of medication use remained the same in spite of the reduction of antipsychotic medication. The diagnoses of challenging behaviour was not affected by the reduction in antipsychotic medication and the increase in ADHD medication use.

**Conclusions:** The use of antipsychotic medication in people with intellectual disabilities and ADHD is high. ADHD should be considered when people present with challenging behaviour. ADHD medication can be effective in treating ADHD-ID and can lead to a significant reduction in the use of antipsychotic medication.

**Disclosure:** No significant relationships.

**Keywords:** challenging behaviour; intellectual disability; ADHD; medication

## O0055

### Distinct behavior in early life stress dams predicts heterogeneity in future stress response in offspring over lifespan

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doi: 10.1192/j.eurpsy.2022.253

**Introduction:** Exposure to early life stress (ELS) strongly predicts prevalent, impairing, and costly psychiatric illness throughout life including mental disorders. The reason, some individuals are more vulnerable to ELS whereas others remain resilient, is poorly understood. There is a need for better understanding of early biological changes triggered by ELS with responsibility to negative outcomes in health.

**Objectives:** We stratify animals after ELS according to corticosterone levels. [1] Re-challenging the animals to a second stressor, chronic social defeat (CSD) [2], in adulthood was performed to understand individual trajectories depending on corticosterone exposure during early adverse conditions.

**Methods:** We performed ELS as previously reported [1]. Behavior of mothers was observed during ELS. Correlation between level of corticosterone and behavior observed in dams. ELS animals were exposed to a second stress in adulthood. A battery of tests for different behavioral domains was performed. Behavioral analyses was combined with assessment of litter HPA system reactivity and observed behavior in dams.

**Results:** Stress dams were significantly higher in number of sorties over whole observation period, time dams spent outside the nest differed. We could correlate the number of sorties on p3 with corticosterone plasma level at p9. Control dams spent significantly more time outside in 9pm recordings than stress animals. We could show reduced interaction with social juvenile targets in sociability test for CSD mice. Light dark transition was significantly higher for control mice compared to CSD but lower for control vs ELS animals.

**Conclusions:** Behavior in dams during ELS correlates with chronic stress coping mechanisms in offspring's adulthood.

**Disclosure:** No significant relationships.

**Keywords:** chronic social defeat; mice experiment; observer-independent behavioral characterisation; early life stress

## O0056

### Oxytocin as a peripheral biomarker for Autism Spectrum Disorder: a systematic review and meta-analysis

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doi: 10.1192/j.eurpsy.2022.254

**Introduction:** Autism spectrum disorder (ASD) is a group of life-long neurodevelopmental conditions characterized by impairments in social communication and by the presence of restricted interests or repetitive behaviors. Several genetic, biological, and psychosocial mechanisms seem to play a role in the etiopathogenesis of this complex condition. Preclinical models have shown a potential role of oxytocin (OT), a peptide involved in a complex range of behaviors, including those related to social interaction. Therefore, it has been hypothesized that OT levels may be decreased in autistic people.

**Objectives:** To compare the levels of peripheral OT in autistic people vs neurotypical controls.

**Methods:** We performed a systematic literature search up to December 2020 according to PRISMA guidelines. Final inclusion was based on the following criteria: (1) Participants: individuals of any age diagnosed with ASD; (2) Controls: neurotypical subjects; (3) Outcome: OT levels, either in saliva, serum, or plasma; (4) Study design: case-control. Meta-analyses are ongoing.

**Results:** We finally included 21 papers published between 1998 and 2020, of which one recruited adult participants. Fifteen studies measured OT levels in plasma, 4 in saliva, and 2 in serum. Preliminary meta-analyses on 10 studies showed that peripheral OT levels in autistic individuals are reduced compared to neurotypical controls, with sex differences.

**Conclusions:** Our preliminary findings show that peripheral OT might represent a potential biomarker for ASD. Future well-conducted case-control studies with a detailed phenotypical characterization of samples are needed to understand the role of OT deficits in specific subgroups.

**Disclosure:** No significant relationships.

**Keywords:** Autism Spectrum Disorder; peripheral biomarker; Oxytocin; systematic review

## O0057

### Tattooing and piercing are associated with symptoms of ADHD: A cross-sectional study of non-clinical adults

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doi: 10.1192/j.eurpsy.2022.255

**Introduction:** Previous studies suggest that individuals with tattoos and piercings exhibit higher impulsive personality traits compared

to peers without body modifications. No studies on body modifications and core-symptoms of ADHD are available.

**Objectives:** This study aimed to compare self-reported ADHD symptoms between non-clinical adults with and without body modifications.

**Methods:** A non-clinical adult Swedish population (n=815) completed the Adult ADHD self-report scale (ASRS-v1.1) and answered questions concerning body modification. ADHD diagnosis served as exclusion criterion. Three grouping variables were analysed separately; tattoo status, piercing status and a combination of having both tattoo and piercing. Linear regression compared mean ASRS total- and subscale scores between individuals with and without body modification according to each grouping variable, while adjusting for candidate covariates age and sex.

**Results:** The prevalence of each body modification variable was; 30% for tattoo, 18% for piercing other than earlobe and 12% for combination of tattoo and piercing. Any combination of body modification was associated with significantly higher ASRS total- and subscale scores compared to no body modification. The most pronounced differences between groups were for the combination of tattoo and piercing, and on the hyperactivity/impulsivity (HI) subscale; revealing adjusted mean differences of 4.3 points (range 0-72) on the ASRS-total score ( $p < 0.001$ ) and 2.6 points (range 0-36) on the ASRS HI subscale ( $p < 0.001$ ).

**Conclusions:** Body modification was associated with more pronounced ADHD core symptoms amongst non-clinical adults. Although statistically significant, the clinical significance is uncertain. The prevalence rates of body modifications in our cohort indicate that they are becoming cultural normal.

**Disclosure:** No significant relationships.

**Keywords:** body piercing; Impulsivity; Attention Deficit Disorder with Hyperactivity; tattooing

## O0058

### Longitudinal effects of antidepressant treatment on resting state functional connectivity in adolescents with major depressive disorder

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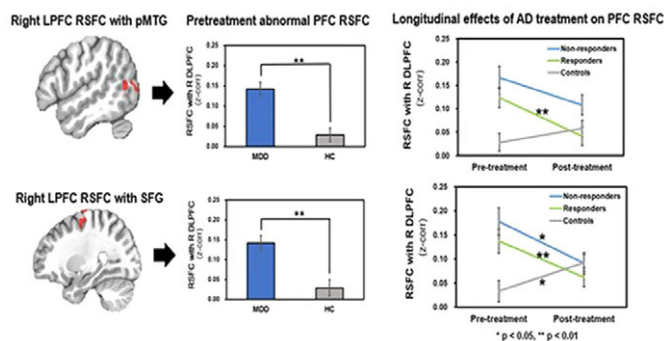
doi: 10.1192/j.eurpsy.2022.256

**Introduction:** Adolescents with major depressive disorder (MDD) often show reduced prefrontal functional connectivity with the subcortical regions than healthy controls (HC) (Tang et al., 2018). However, relatively little is known about longitudinal effects of antidepressant (AD) treatment on resting state functional connectivity (RSFC) in the prefrontal cortex (PFC).

**Objectives:** This study aimed to investigate abnormal PFC RSFC in MDD adolescents compared to HC and longitudinal effects of AD on PFC RSFC.

**Methods:** This study included 59 adolescents with MDD and 43 HC. MDD adolescents were treated with escitalopram in an 8 week, open-label trial. The treatment outcome was assessed by Children's

Depression Rating Scale (CDRS-R) and patients showing at least a 40% improvement in CDRS-R scores from baseline to week 8 were defined as "responders". Functional and T1 images collected before and after treatment were processed using AFNI and Freesurfer. Our seed was the lateral PFC (LPFC, BA46). T-tests and repeated measures ANCOVAs, controlling for age and IQ, were conducted to examine abnormal PFC RSFC and longitudinal effects of AD on LPFC RSFC. **Results:** Relative to HC, MDD showed increased LPFC RSFC with the posterior middle temporal gyrus (pMTG) and superior frontal cortex (SFG) involved in attentional networks. Responders showed greater changes in LPFC RSFC with the MTG and SFG after AD treatment compared to non-responders and HC (Figure 1).



**Conclusions:** Our finding suggests that reduced LPFC RSFC with the pMTG and SFG reflecting decreased attentional network connectivity may serve as a biomarker to predict AD treatment outcome in adolescents with MDD.

**Disclosure:** No significant relationships.

**Keywords:** adolescence; major depressive disorder; resting-state functional connectivity; antidepressant treatment

## Depressive Disorders / Training in Psychiatry

## O0059

### Bipolar disorder correlated to shorter remission latency and borderline personality disorder symptom severity to longer in depression – a prospective cohort study of major depressive patients

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doi: 10.1192/j.eurpsy.2022.257

**Introduction:** Major depressive episodes (MDE) occur in major depressive (MDD) and bipolar disorders (BD), and are frequently complicated by borderline personality disorder (BPD). Mixed affective symptomatology is a hallmark of BD, and affective lability of BPD; both may markedly influence illness course. However, direct comparisons of outcome of depression in MDD, BD and BPD are scarce.