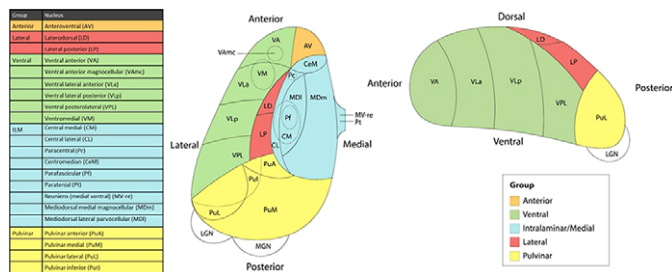


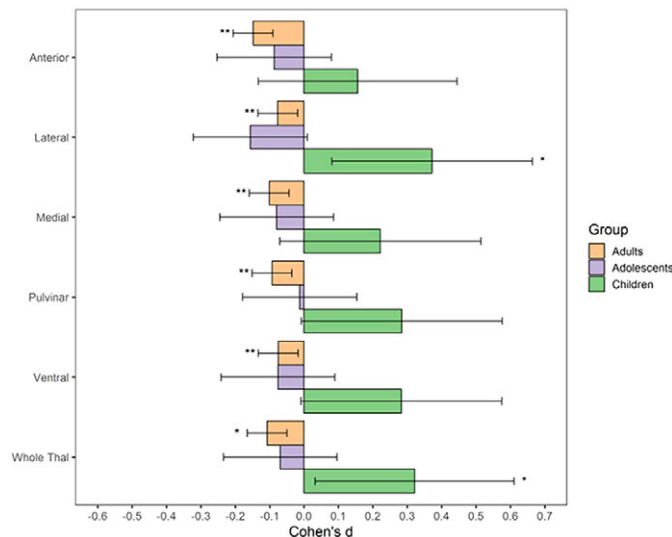
et al. 2017, Weeland et al. 2021a). Functionally distinct thalamic nuclei are an integral part of OCD-relevant brain circuitry.

**Objectives:** We aimed to study the thalamic nuclei volume in relation to subclinical and clinical OCD across different age ranges. Understanding the role of thalamic nuclei and their associated circuits in pediatric OCD could lead towards treatment strategies specifically targeting these circuits.

**Methods:** We studied the relationship between thalamic nuclei and obsessive-compulsive symptoms (OCS) in a large sample of school-aged children from the *Generation R Study* (N = 2500) (Weeland et al. 2021b). Using the data from the ENIGMA-OCD working group we conducted mega-analyses to study thalamic subregional volume in OCD across the lifespan in 2,649 OCD patients and 2,774 healthy controls across 29 sites (Weeland et al. 2021c). Thalamic nuclei were grouped into five subregions: anterior, ventral, intralaminar/medial, lateral and pulvinar (Figure 1).



**Results:** Both children with subclinical and clinical OCD compared with controls show increased volume across multiple thalamic subregions. Adult OCD patients have decreased volume across all subregions (Figure 2), which was mostly driven by medicated and adult-onset patients.



**Conclusions:** Our results suggests that OCD-related thalamic volume differences are global and not driven by particular subregions and that the direction of effects are driven by both age and medication status.

**Disclosure:** No significant relationships.

**Keywords:** OCD; thalamus; Neuroimaging; segmentation

O0038

**Obsessive-compulsive Symptoms in Dementia : Scoping Review of Neurobiological and Cognitive Underpinnings**

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**Introduction:** Obsessive-compulsive symptoms (OCS) have been described in many neurological disorders, including dementia. A meta-analysis by the authors (2021) reported a prevalence of OCS in dementia of approx. 35.8%, and a higher percentage in frontotemporal dementia (FTD) (46.7%). The literature also points that obsessive-compulsive disorder with late-life onset is rare, but those cases are frequently associated with neurologic injury, and some authors suggest a role of cognitive disfunction.

**Objectives:** Our main goal was to describe the neurobiologic and cognitive underpinnings of OCS in patients with dementia.

**Methods:** MEDLINE, CENTRAL and PsycNet databases were searched for articles about obsessive-compulsive symptoms in dementia. Search terms included “obsessive”, “compulsive”, “OCD”, “cognitive decline”, “cognitive dysfunction” and “dementia”. Titles, abstracts and full texts were screened independently by 2 reviewers.

**Results:** Correlations between dysfunction / lesions in various circuits in the context of dementia and OCS were found, such as (1) frontal regions (specially the orbitofrontal cortex) and anterior cingulate cortex (2) fronto-striatal-thalamic circuits (3) temporal structures; (4) cerebellar structures; (5) serotonergic, dopaminergic, and cholinergic neurotransmission. A high proportion of studies concerned FTD. Regarding cognitive mechanisms, there is a focus on the importance subjective concerns about cognitive functioning, which could exacerbate obsessional beliefs and maladaptive responses to intrusions.

**Conclusions:** The main brain circuits implicated in dementia, specially FTD, and OCS are those involving frontal regions and the fronto-striatal-thalamic circuits, with areas such as the temporal and cerebellar structures also being studied. The correlation between dysfunctional circuits in dementia and OCS could give us new hints about OCD and its treatment.

**Disclosure:** No significant relationships.

**Keywords:** frontotemporal dementia; obsessive-compulsive disorder; Obsessive-compulsive symptoms; Dementia

O0039

**MDD patients with early life stress deactivate the frontostriatal network during facial emotion recognition paradigm: A functional MRI study**

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**Introduction:** Early life stress (ELS) is a significant risk factor for major depressive disorder (MDD) in adults. Functional magnetic resonance imaging (fMRI) studies using face emotion processing paradigms have found altered blood-oxygen-level-dependent (BOLD) responses in the cortico-limbic network both in individuals exposed to ELS and in patients with MDD. Thus, early life stress may have a long-lasting impact on brain areas responsible for the processing of socio-affective cues.

**Objectives:** By applying a facial emotion recognition (FER) fMRI paradigm, we examined the long-term effect of childhood adversity on brain activity in MDD patients with and without ELS.

**Methods:** MDD patients without ELS (MDD, N=19), those with ELS (MDD+ELS, N=21), and healthy controls (HC, N=21) matched for age, sex, and intelligence quotient underwent fMRI scanning while performing a block design FER task with faces expressing negative emotions. The severity of ELS was assessed with the 28-item Childhood Trauma Questionnaire.

**Results:** Both MDD and MDD+ELS patients were slightly impaired in recognizing sad faces. Statistical analysis of brain activity found that MDD+ELS patients had significantly reduced negative BOLD responses in the right anterior paracingulate gyrus, subcallosal cortex accumbens compared to HCs. Moreover, the MDD+ELS group had a significantly increased negative BOLD signal in the right postcentral and precentral gyri relative to the HC group. MDD+ELS patients had reduced negative BOLD response in their anterior paracingulate gyrus compared to the MDD group.

**Conclusions:** Our results support that adult MDD patients with significant ELS are impaired in facial emotion recognition and they display functional alterations in the frontostriatal circuits.

**Disclosure:** This work was financially supported by the Hungarian Brain Research Program (2017-1.2.1-NKP-2017-00002)

**Keywords:** early life stress; functional MRI; facial emotion recognition; major depressive disorder

## Addictive Disorders

O0041

### Atypical working hours are associated with substance use, especially in women: longitudinal analyses from the CONSTANCES cohort

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**Introduction:** Difficult working conditions could be associated with addictive behaviors.

**Objectives:** To examine the prospective associations between atypical working hours and substance use, including sugar and fat consumption.

**Methods:** In the CONSTANCES cohort, a total of 47,288 men and 53,324 women currently employed were included from 2012-2017 for tobacco and cannabis outcomes, and 35,647 and 39,767, respectively from 2012-2016 for alcohol and sugar and fat outcomes, and they were then followed up annually. Atypical working hours were self-reported at baseline and considered three different indicators: night shifts, weekend work and non-fixed working hours. Generalized linear models computed odds of substance use and sugar and fat consumption at follow-up according to baseline atypical working hours while adjusting for sociodemographic factors, baseline depression and baseline level of consumption.

**Results:** Night shifts increased significantly the odds of using tobacco in women (Odds ratios, ORs varying from 1.55 to 1.62) and cannabis in men (ORs varying from 1.80 to 1.95). Weekend work increased the odds of using tobacco (ORs varying from 1.51 to 1.67) and alcohol (OR of 1.16) in women. Non-fixed working hours increased the odds of using tobacco and alcohol in men and women (ORs varying from 1.15 to 1.19 and 1.12 to 1.14, respectively). Dose-dependent relationships were found for tobacco use in women (P for trends < 0.0001). No significant associations were found for sugar and fat consumption.

**Conclusions:** The role of atypical working hours on substance use should be taken into account by public health policy makers and clinicians for information and prevention strategies, especially among women.

**Disclosure:** Nadine Hamieh was supported by a grant from "Direction de la recherche, des études, de l'évaluation et des statistiques", DREES, Ministry of Labour, France.

**Keywords:** Atypical working hours; substance use; Epidemiology; Sugar and fat

O0042

### Increased Risk for Substance Use-Related Problems in Mild Intellectual Disability: A Population-Based Cohort Study

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**Introduction:** Intellectual disability (ID) has been linked to substance use-related problems (SUP). However, previous research is limited by the small sample sizes, lack of general population