assessment of genetic background of impaired inhibition may contribute to our knowledge about the genetic background of the disorder.
Objectives: In our study we investigated whether different forms of impulsivity (attentive, motor, and nonplanning) and polymorphisms in genes of the noradrenergic, serotonergic, and dopaminergic neurotransmission, i.e. dopamine transporter-1 (DAT1), cathecoloamin-O-metiltransferase (COMT), and serotonin receptor-1B (HTR1B genes show association.
Methods: 208 aADHD patients diagnosed according to DSM-5 criteria from a clinical sample and 142 individuals from a population sample who screened positive for aADHD were included in the study. DNA samples were genotyped for the HTR-1B gene rs1321041 and the COMT gene rs4680 SNPs, moreover the DAT-1 VNTR polymorphism. Dimensional variables for impulsivity were compared between genotypes with the Generalized Linear Model procedure corrected for sex and age, using the PLINK 1.9 statistical software.
Results: The 9 repeat polymorphism in DAT1 was associated with the severity of hyperactivity, moreover, all impulsivity factors. The A allele in COMT was associated with hyperactivity and better motor inhibition activity. In carriers of the G allele in HTR1B we detected significantly higher inattention scores and increased reaction time.
Conclusions: Our results support the putative role of the investigated genetic polymorphisms in the etiology of impulsivity. Nevertheless, these polymorphisms demonstrate a heterogeneous associations.

Disclosure: No significant relationships.
Keywords: adhd; Impulsivity; DAT1; hyperactivity

EPP0306

Clinical impact of functional CYP2C19 and CYP2D6 gene variants on treatment outcomes in patients with depression: a Danish cohort study

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Introduction: Pharmacogenetic (PGx) targets to optimize drug therapy, but its implementation is rare.
Objectives: We evaluate the clinical utility of PGx testing in psychiatry by investigating the one-year risks of clinical outcomes in patients with depression taking sertraline, (es)citalopram or fluoxetine by their Cytochrome P450 (CYP) 2C19/2D6 phenotypes.
Methods: We investigated 17,297 individuals born between 1981-2005 with a depression diagnosis between 1996-2012 from the iPsych2012 case-cohort. Based on array-based single-nucleotide-polymorphism genotype data, individuals were phenotyped as CYP2C19/CYP2D6 normal (NM, reference group), ultra-rapid- (UM), rapid- (RM), intermediate- (IM), or poor-metabolizer (PM). Outcomes were treatment switching or discontinuation, psychiatric in-, out-, and emergency room contacts (ER), and suicide attempt/self-harm. Incidence rate ratios (IRR) by age groups were estimated using Poisson regression analysis with 95% confidence intervals, adjusted for potential confounders.
Results: Risks of switching (IRR=1.89[1.22-2.93]), ERs (1.69 [1.01-2.81]) and suicide attempt/self-harm (2.73 [1.49-5.01]) were higher in CYP2C19 PMs <19 years taking (es)citalopram. Fluoxetine users <19 years had a decreased risk of discontinuation in CYP2D6 PMs (0.5 [0.27-0.95]) and decreased risk of out-patient contacts in CYP2D6 PMs and IMs (IRR_{IM}=0.83 [0.68-1.00] and IRR_{PM}=0.59 [0.37-0.96]). We observed an increased risk for ERs in CYP2D6 PMs aged 19-25 years taking fluoxetine (4.53 [1.54-13.35]). In CYP2C19 UMs >25 years taking (es)citalopram the risk of suicide attempt/self-harm was more than three-fold increased (3.64 [1.01-13.19]). We found no significant results in users of sertraline.
Conclusions: PGx variability was associated with treatment outcomes in depression in patients with CYP2C19 PM or UM status taking (es)citalopram, or CYP2D6 PM or IM status taking fluoxetine.

Disclosure: No significant relationships.
Keywords: pharmacogenetics; sertraline; (es)citalopram and fluoxetine; Depression

EPP0308

Body mass index and depressive rumination are positively associated with each other only in case of GG genotype of catenin alpha 2 gene rs13412541 variant

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Introduction: Catenin alpha 2 gene (*CTNNA2*) is important in the stability of hippocampal synapses and also in brain development. Our recent paper (Eszlari et al, *Pharmaceuticals* 2021, 14, 850) has demonstrated that rumination on sad mood mediates the association of *CTNNA2* only towards psychiatric symptoms, but not towards cardiovascular risk phenotypes.
Objectives: Our present aim was to test the moderating role of rumination and its two subtypes, brooding and reflection, in genetic associations between *CTNNA2* and the same cardiovascular risk phenotypes.
Methods: 633 unrelated subjects from the Budakalasz Health Examination Survey with non-missing phenotypic data, and 160 single-nucleotide *CTNNA2* variants remaining after quality control, were included. Linear regression models were run in Plink 1.9 for separate outcomes of body mass index (BMI), and Framingham risk scores for cardiovascular disease, coronary heart disease, myocardial infarction, and stroke. With each variant, predictors were the variant, rumination or its subtype, the variant x rumination interaction, sex, age, and the top ten principal components of

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the genome. 100,000 label-swapping max(T) permutation was applied for the interaction term within each analysis.
Results: While no significant interaction term survived the family-wise permutation, two trends emerged. Namely, BMI seems to have positive association with rumination and its maladaptive brooding subtype only in case of GG genotype of rs13412541, otherwise no association can be detected.
Conclusions: Although replication is needed in larger samples, the relationship between rumination and BMI, conditional on *CTNNA2* genotype, can be important in atypical depression, thus may contribute to stratification of depressed patients.

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Keywords: perseverative negative thinking; body mass index; catenin alpha 2; depressive rumination

EPP0309

Model-based and model-free decision making in major depressive disorder after performing behavioral training

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Introduction: In major depressive disorder (MDD), reward-based decision-making (DM) is frequently impaired: e.g. patients don't engage in pleasant activities as much as healthy subjects. Put differently, previous and expected future rewards have less reinforcing effects on DM. This study investigated two experimentally well-observable reward-based DM modes, namely model-based (based on cognitive models of the environment) and model-free (based on previous experience) DM.
Objectives: We hypothesized that model-based training can improve reward-based DM in patients with MDD. Answers to these questions could enhance the development of cognitive-behavioral therapeutic interventions.
Methods: 27 patients with MDD were recruited and assessed with psychometry. All patients performed the „two-step Markov decision-task" (Daw, 2011), which allows the simultaneous investigation of model-based and model-free DM via computational modelling. All subjects performed the task 4 times: at the beginning and at the end of 2 assessment days (session-interval: 4 days). Subjects were randomly allocated to an intervention group, which performed model-based training, and a control group, which performed model-free training. The main outcomes of training effect were the influence of model-based reward expectations on decisions (quantified by computational modelling parameters) and overall monetary reward-success.
Results: In all patients, the influence of model-based reward expectations on decisions increased after training. However, there was no significant effect of group allocation. Furthermore, patients in the intervention group did not achieve significantly higher overall monetary reward.
Conclusions: Results suggest that in MDD, the influence of model-based reward expectations on decisions can be improved regardless of specific training type. Future studies should investigate the effects on everyday functioning.

Disclosure: No significant relationships.
Keywords: behavioral training; decision making; model based; major depressive disorder

EPP0310

Being a psychiatric resident during COVID times – personal experiences of Hungarian trainees

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Introduction: During the COVID-19 pandemic residents of the central region of Hungary also had to adapt to several challenges such as changes of hospitals' specialty profiles and delegation of health care workers to COVID wards.
Hungarian residents have their practical training in various hospitals, while their psychiatric academic training is organised in groups.
Objectives: Our aim is to share our personal experiences about how our work and training have changed during the pandemic and it's effect on our patients.
Methods: Participants of the study were the authors of the poster. Responses to open questions were structured based on the following topics: competencies in internal medicine, infectious diseases and psychiatry, our collaboration with other medical disciplines, psychiatric training and attitudes towards mental health patients.
Results: We worked min 2 weeks max 8 months at COVID wards and also treated COVID-19 infected psychiatric patients, thus gaining a greater experience in general medicine. In psychiatric work, acute care became prominent, communication in PPE and restricted contact with patients' relatives were particularly difficult. Our relationship with other specialists has improved, consultation became easier. Increased use and misuse of psychiatric consultation requests led to further pressure. Restrictions, stigmatisation and discrimination increased against psychiatric patients, including difficult access to care. Psychiatric training in the hospitals became limited, however seminars organized by the university continued online with our active participation.
Conclusions: During the pandemic we gained greater experience in general medicine. Psychiatric care and our training was negatively affected, however the latter was mitigated by online seminars.

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