

Abstract: This prospective study aimed to examine changes in mental health and differences due to educational status (ES) and country among young adults aged 20-40 from four countries during the COVID-19 pandemic in a three-month period.

The total of 1714 participants (932 women): students ($n = 321$) and non-students ($n = 519$) aged 20-30, educated ($n = 388$), and non-educated ($n = 486$) adults aged 31-40 from Poland ($n = 445$), Slovenia ($n = 430$), Germany ($n = 417$), and Israel ($n = 422$) responded to online survey in February 2021 and May-June 2021. The used measurements were: Perceived Stress Scale (PSS-10), Generalized Anxiety Disorder (GAD-7), and Patient Health Questionnaire (PHQ-8).

A repeated-measures two-way mixed-factor ANOVA was performed to examine changes over time, educational status (ES), and across countries for mental health indicators. The results showed stability over time in anxiety and depression while a small decrease in stress. Students scored significantly higher in stress, anxiety, and depression compared to non-/educated adults and in depression compared to non-studying peers. Participants from Poland and Germany scored higher in anxiety and depression than from Slovenia and Israel. Moreover, Polish participants reported the highest stress among all countries.

The student population is more vulnerable to mental health issues than non-studying peers and adults with and without an academic degree, particularly in Poland and Germany.

Disclosure of Interest: None Declared

S0031

Neuronal plasticity and fast antidepressant response

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Abstract: Neuronal plasticity has for a long time been considered important for the recovery from depression and for the antidepressant drug action, but how the drug action is translated to plasticity has remained unclear. Brain-derived neurotrophic factor (BDNF) and its receptor TRKB are critical regulators of neuronal plasticity and have been implicated in the antidepressant action. We have recently found that many, if not all, different antidepressants, including serotonin selective SSRIs, tricyclic as well as fast-acting ketamine, directly bind to TRKB, thereby promoting TRKB translocation to synaptic membranes, which increases BDNF signaling. We have previously shown that antidepressant treatment induces a juvenile-like state of activity in the cortex that facilitates beneficial rewiring of abnormal networks. It is important to note that enhanced plasticity does not necessarily promote recovery, but may also be maladaptive if the environment is adverse. Our findings open a new framework for the antidepressant action and for treatment of depression: antidepressants directly bind to TRKB and allosterically promote BDNF signaling, thereby inducing a state of plasticity that allows re-wiring of abnormal networks for better functionality, when optimal supportive therapy is provided at the time of enhanced plasticity.

Disclosure of Interest: E. Castrén Speakers bureau of: Janssen-Cilag

S0032

Mental Health of Health and Medical Students during the COVID-19 Pandemic: National Studies

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Abstract: Since the COVID-19 pandemic's beginning, psychiatrists and searchers have been worried about mental health degradation, especially for caregivers and students. Health students are still students and yet caregivers.

Two national studies were done in 2021. First on all health students from April 4th to May 11th 2021 (during the 3rd lockdown in France, 1 year after the first one). Second only on medical students from May 27th and June 27th 2021. Both used online surveys

In the first, 16,937 health students answered, including 54% of nurse students. Regarding Kessler-6 scale for psychological distress, 14% had moderate (8-12), and 83% had high (≥ 13) levels of psychological distress. In multivariate analysis, being unable to isolate themselves and having financial difficulties were associated with an increased risk of

psychological distress. On the opposite, being a man and not living alone were associated with a reduced risk of psychological distress. In the second, 11,754 participants (response rate: 15.3%) were included. Prevalence of 7-day anxiety symptoms, 7-day depressive symptoms assessed by Hospitalization Anxiety and Depression Scale (HADS), 12-month MDE (using Composite International Diagnostic Interview- Short Form), and 12-month suicidal thoughts were 52%, 18%, 25%, and 19%, respectively. Burnout syndrome (evaluated by Maslach Burnout Inventory) concerned 64% of clinical students and residents and 30% of preclinical students.

These 2 studies highlighted the elevated level of mental distress in health students, especially medical students in France. Preventive and curative actions are needed to help them.

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S0033

Managing sleep disorders in ADHD: identification, consequences and clinical management

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Abstract: Adequate sleep quality and quantity are essential for optimal occupational and psychological health as well as cognitive function. In up to 78% of adults with ADHD, several sleep disorders are associated.^{1,2} These include delayed circadian rhythm, insomnia, sleep-related movement and breathing disorders and altered sleep duration.^{3,4} Such sleep problems have consequences in the family and somatic health spheres. In the workplace, adult ADHD coupled with untreated sleep disorder leads to significant occupational impairment. Low employment status, unpredictable behaviour, relationship difficulties, mood lability, risk of injury and

accidents are all described as potential associations, with far-reaching consequences. When ADHD is coupled with sleep disorders, cognitive performance deteriorates further and sickness absence is more common. The clinical presentation of the sleep disorders commonly associated with ADHD will be described in detail. State-of-the-art therapeutic interventions will be discussed based on clinical experience and research findings from our Expertise Centre.

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S0034

Synaptic plasticity in depression: from mice to humans

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Abstract: In the last decade, neuroplasticity has become largely accepted in the etiology and treatment of mood disorders. Animal models of depression showed that severe stress downregulates many forms of plasticity, resulting in an inhibition of long-term potentiation (LTP), a facilitation of long-term depression (LTD) and an impairment of synaptic transmission. Essentially all treatments for mood disorders, including the rapid acting antidepressant ketamine, promote neuroplasticity and plasticity plays a critical mechanistic role in recovery. Therefore, a targeted intervention of LTP/LTD pathways by small molecules or highly specific RNA therapeutics could lead the way to novel and fast acting antidepressants. For instance, an RNA-based modulation of N-methyl-D-aspartate receptor subunits rescued LTP and exerted rapid antidepressive effects in mice models of depression. The translation of such principal, the rescue of plasticity as an antidepressive intervention, from rodents to humans is an ongoing challenge. However, various indirect assessment methods of plasticity in humans, like visually evoked (VEP) potentials and transcranial magnetic stimulation (TMS)-based paired associative stimulation paradigms revealed an impairment of plasticity in depressed humans, which was found corrected after effective treatment.

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S0035

The efficacy of psychological interventions for university students: a systematic review and meta-analysis

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Abstract: Introduction: Mental health problems are increasingly prevalent among students, necessitating adequate mental health support both for those who with or at risk of developing a mental health disorder.

Objectives: This systematic review examined the efficacy of psychological interventions delivered to student populations and whether interventions with some form of adaptation to the content or delivery of the intervention for students could improve outcomes compared to interventions which had no such adaptation.

Methods: Randomised controlled trials of interventions for students with or at risk of mental health problems were included. Specific adaptation for students (or whether they utilised a student population as a convenient sample) was recorded. Meta-analyses were conducted and multivariate meta-regressions explored the effect of adaptation on the pooled effect size. Eighty-four studies were included

Results: Promising effects were found for both treatment and preventative interventions for anxiety disorders, depression and eating disorders. PTSD and self-harm data was limited, and did not demonstrate significant effects. Relatively few trials adapted intervention delivery to student-specific concerns, and overall adapted interventions showed no benefit over non-adapted interventions. There was some suggestion that adaptations based on empirical evidence and provision of additional sessions, and transdiagnostic models may yield some benefits

Conclusions: Interventions for students show benefit though uncertainty remains around how best to optimise treatment delivery and content specifically for students. It would be beneficial to understand how intervention content which is specific to underlying mechanisms of problems experienced by students as well as more transdiagnostic approaches could further support recovery and prevention of mental health problems while at university.

Disclosure of Interest: None Declared

S0036

The Super Brains app: a psycho-educative program for adults with ADHD

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Abstract: Digital treatment for neurodevelopmental disorders is being developed in order to treat patients online when possible, to reduce waiting lists and to improve efficacy and efficiency of treatment. In this presentation, experiences with the so called Start Program of the Super Brains app for adults with ADHD are presented. The Super Brains app has been developed by Rutger den Hollander, who himself has ADHD and owns an ICT company,