

treatment protocols based on them. These possibilities open up new perspectives for personalized interventions in psychotherapy. The affective neurosciences that link psychopathological phenomena to the hypersensitization of emotional systems are an excellent field of application of deep learning algorithms

**Objectives:** In this contribution we present the standardization of a psychodiagnostic test that can be analyzed with a deep learning algorithm for the development of personalized treatments for depressive disorders in a perspective of precision psychotherapy

**Methods:** Previously we have constructed a psychodiagnostic test that correlates the psychopathological characteristics to the emotional systems described in affective neuroscience. The construction of this test was carried out with the use of a neural network that discriminated 161 items from a pull of 300 psychopathological and character descriptions. In the present work, the 161 selected items were compared, in a sample of 600 subjects, with the measurement of sadness described in the Panksepp model. Comparison was performed with linear and non-linear statistical analysis methods.

**Results:** The items emerging from the statistical analyzes as strongly indicative of a hypersensitivity of the sadness system outline a psychopathological profile for which it is possible to adapt specific psychotherapeutic treatment protocols.

**Conclusions:** In future prospect, neurobiological and psychophysiological variables such as heart rate variability, skin conductance and activity of the areas of the cortex, measured with a scanner of the near infrared photons, will be correlated to these descriptors of psychopathology.

**Keywords:** Personality; psychopathology; test; Artificial Intelligence

## EPP0962

### Mental health in time of pandemics: Study protocol to incorporate risk and protective factors contributing to psychological stress among portuguese and swiss higher education students

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**Introduction:** The ongoing COVID-19 pandemic is inducing fear, and a timely understanding of mental health status is urgently needed for society. Previous research has revealed a profound and wide range of psychosocial impacts on people at the individual, community, and international levels. On an individual level, people are likely to experience fear of falling sick or dying themselves, feelings of helplessness, and stigma. Currently, there is little understanding of mental well-being assessment under scenarios of pandemics that oblige to social isolation and quarantine.

**Objectives:** This study aims to: a) establish the prevalence of psychiatric symptoms; b) identify risk and protective factors contributing to psychological stress; and c) identify coping strategies to promote better adjustment during and after the pandemic crisis.

**Methods:** We will adopt a mixed-method approach, firstly with a cross-sectional survey design (in both Portugal and Swiss context) to

assess the higher education student's psychosocial response during and after the pandemic, by using an anonymous online questionnaire.

In a 2nd phase, and in order to gain more insight into the psychological stress faced by the students as a result of pandemic, a qualitative approach was chosen, focusing on the experiences of the participants.

**Results:** This study has received ethical approval from both international and local institutional review boards. Data collection will start in November 2020 and will be completed at February 2021.

**Conclusions:** The findings of this study will provide important data to assist government agencies and healthcare professionals in safeguarding the psychosocial wellbeing of the community in the face of COVID-19 outbreak expansion.

**Keywords:** Study protocol; pandemics; psychological stress; higher education students

## EPP0963

### Professional stress-related disorders in first-line responders- how far are we from real prevention strategies?

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**Introduction:** In the context of COVID-19 pandemic, first-line responders (FLR) are exposed to multiple stress factors, ranging from lack of adequate protective equipment to worries about family health due to work-related exposure to the new coronavirus. Therefore, FLR became themselves a vulnerable population that need prevention strategies for professional stress-related disorders (PSRD).

**Objectives:** To explore the literature in order to find evidence-based prevention strategies for PSRD in FLR, strategies resulted from other epidemiological crisis situations (MERS-CoV, H1N1, SARS-CoV) that may be applied in the current pandemic.

**Methods:** A literature review was performed through the main electronic databases (PubMed, CINAHL, SCOPUS, EMBASE) using the search paradigm "professional stress-related disorders" AND "first line responders" AND "prevention". All papers published between January 2000 and June 2020 were included.

**Results:** Reported prevalence of post-traumatic stress disorder in FLR involved in epidemiological crises was between 10% and 33%. Evidence-based recommendations for PSRD prevention are lacking, and only general advices have been detected. These suggestions were clustered on institutional level (e.g., involving of medical personnel in administrative decisions, encouraging personal initiatives, longer pauses between shifts) and individual level (e.g., training of coping abilities, relaxation techniques, and peer-focused group support). Several guidelines for prevention of mental disorders in workplace exist, but they are not focused on FLR.

**Conclusions:** The need to elaborate guidelines for prevention of PSRD in FLR can not be overemphasized, especially in the pandemic period, in order to avoid the onset of stress-related complications, and to preserve a good quality of the medical activity.

**Keywords:** professional disorders; stress-related disorders; prevention strategies; COVID-19

## EPP0964

### N-acetyl-cysteine administration during foetal life improves social behaviour and restores hippocampal bdnf levels in adolescent mice prenatally exposed to a high-fat diet

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**Introduction:** Maternal obesity may affect foetal programming representing a risk for adult mental health. Oxidative stress and inflammation associated with maternal obesity can alter the maturation of neuronal circuits affecting behaviour and mood.

**Objectives:** We investigated the emotional phenotype of male and female mouse offspring born from a high-fat diet (HFD) fed dams. We also tested the efficacy of N-acetyl-cysteine (NAC – an antioxidant) in preventing the negative effects of HFD. We focused on adolescence, an age of main vulnerability for the onset of psychopathology.

**Methods:** Female C57BL/6N mice were fed HFD for 13 weeks and, after 5 weeks, were also exposed to NAC (1 g/kg b.w.) via drinking water, until delivery. The neurodevelopment of offspring was assessed through the homing test. Emotionality was assessed in 35-45-day-old adolescent mice through elevated-plus-maze (EPM) and social interaction tests (SIT). Transcriptomic analysis of hippocampal tissue were performed to identify mechanisms of action of both HFD and NAC.

**Results:** NAC was effective in moderating body weight gain in HFD-fed dams. Neither HFD or NAC affected offspring development. Regardless of sex, prenatal HFD reduced exploration and decreased sociability, in EPM and SIT respectively. Prenatal HFD decreased hippocampal levels of BDNF in female offspring. Prenatal NAC administration prevented social anxiety and restored BDNF levels in the HFD group.

**Conclusions:** Data indicate long-term effects of maternal obesity on dams' weight, offspring's behaviour and hippocampal BDNF levels. These effects may be mediated by changes in oxidative stress as NAC was effective as a preventive agent. ERANET-NEURON-JTC 2018 (Mental Disorders) Project "EMBED".

**Keywords:** foetal programming; social anxiety; N-acetyl-cysteine; maternal obesity

## EPP0966

### Emotional eating as a risk factor for body image and life satisfaction

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**Introduction:** Previous studies have shown that emotional eating is associated with binge eating disorder, body image disturbances and depression.

**Objectives:** In this study we wanted to find out if there is a relationship between emotional eating and body image and life satisfaction in non-clinical sample.

**Methods:** The study involved 182 normal participants (153 Female, 29 Male, mean age 22,6 ± 7,3), which were recruited in Moscow, Russia. Emotional eating was measured by the opposite pole of Eating for Physical Rather Than Emotional Reasons subscale of Intuitive Eating Scale-2 (IES-2), body image was measured by Multidimensional Body-Self Relations Questionnaire (MBSRQ), Satisfaction with Life Scale (SWLS) was used to measure the corresponding construct. Correlation analysis was performed in IBM SPSS Statistics 22.0.

**Results:** Emotional eating was associated with the following MBSRQ subscales: lower appearance evaluation (-0,431, p<0,0001), lower body areas satisfaction (-0,335, p<0,0001), as well as lower fitness evaluation (-0,208, p=0,005) and lower health evaluation (-0,182, p=0,014), but higher overweight preoccupation (0,279, p=0,0001) and overestimation of body weight (0,362, p<0,0001). It was also connected to lower satisfaction with life (-0,195, p=0,008).

**Conclusions:** The results of the study allow us to conclude that emotional eating may pose risks to psychological health of a normal individual. It was shown that emotional eating is connected to negative evaluation of one's body appearance, fitness and health state, weight and shape concerns, and even to the lower level of satisfaction with one's life.

**Keywords:** body image; satisfaction with life; emotional eating

## EPP0967

### Disordered eating and BMI predict negative body image

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**Introduction:** It is known that negative body image can cause significant emotional distress for an individual and thus lead to lower subjective well-being. Previous research has shown that both disordered eating and body mass are connected to negative body image.

**Objectives:** To examine how disordered eating and BMI can predict different aspects of body image.

**Methods:** A sample of 180 healthy respondents (152 Female, 28 Male, mean age 22,62±7,35) were recruited in Moscow. Disordered eating was measured by Eating Attitude Test (EAT-26; Garner D. et al., 1982), body image was measured by Multidimensional Body-Self Relations Questionnaire (MBSRQ; Cash T. F., 1990). Body mass index (BMI) was calculated on the basis of self-reported data (height and weight). Multiple linear regression analysis was performed in IBM SPSS Statistics 22.0.

**Results:** Regression model with both predictors determined self-classified weight (SCW; R<sup>2</sup>=0,569, p<0,0001), overweight preoccupation (OWP; R<sup>2</sup>=0,497, p<0,0001), body areas satisfaction (BASS; R<sup>2</sup>=0,259, p<0,0001), and appearance evaluation (R<sup>2</sup> = 0,229, p<0,0001), but only disordered eating symptoms predicted appearance (R<sup>2</sup> = 0,193, p<0,0001) and health (R<sup>2</sup> = 0,036, p<0,05) orientation, and none of the predictors affected fitness or health evaluation and fitness orientation.

**Conclusions:** Symptoms of disordered eating and body mass index in normal population can predict self-evaluation of one's