nity. Studying psychiatry is therefore useful to reduce, in the future doctors, these prejudices toward mentally ill patients.
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EW415

Physical exercise and students' mental health

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Introduction Studies have shown that sport participation is connected with a more positive self-image and higher self-esteem in adolescents (Bowkers, 2006, Kirkcaldy et al., 2002), whereas sedentary behavior is associated with negative mental health characteristics (Primack et al., 2009).
Purpose The aim of this study was to investigate whether physical activity influences adolescents and young people's emotions, self-esteem and generally mental health.
Material Questionnaires were redacted by the research team investigating participants' habits, emotions and health benefits concerning physical activities.
Method Questionnaires were administered to 150 adolescents, aged 18–20 years old in Technological Educational Institutes, colleges and fitness centers in Patras, Southern Greece during 2015's spring.
Results Eighty-seven percent of the respondents worked out in fitness centers or in natural environment. Most of them answered that exercise contributed to revitalization and euphoria feelings (63%), stress relief (78%), better self-image, and better health (49%). According to 63% of the adolescents, exercise improved their school performance and 61% of them felt that exercise affected positively mental health.
Conclusions Present study's results underline physical activities' benefits in students' mental health, self-esteem, feelings and school performance being in line with other studies' results [Biddle et Asare (2011), Ekeland et al. (2005), Brown et al. (2013)]. Restrictions refer mainly to small size sample.
Disclosure of interest The authors have not supplied their declaration of competing interest.
Further reading
Biddle, SJ, Asare, M. Physical activity and mental health in children and adolescents: a review of reviews. Br J Sports Med 2011;45:886–95.
Kirkcaldy, BD, Shephard, RJ, Siefen, RG. The relationship between physical activity and self-image and problem behaviour among adolescents. Soc Psychiatry Psychiatric Epidemiol 2002;37(11):544–50.

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EW416

Effects of implicit affect on emotional coping and school adjustment: A short-term longitudinal study with a school-based universal prevention program for enhancing emotional abilities

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In recent years, affect and emotions are hot research topics in the domains of psychology and brain science. Moreover, an increasing number of studies have started to investigate the effects of implicit affect on health and adjustment. The purpose of this study was to examine the effects of implicit affect on explicit emotional coping with others' emotions and school adjustment in children.
Methods Participants were 5th- and 6th-grade children in two public elementary schools in Japan. The final samples were fifty-six children (25 boys and 31 girls). Participants completed a battery of three questionnaires just before (T1) and after (T2) an school-based universal prevention program for enhancing emotional coping abilities with others' emotions, which was implemented in eight classes during one month. The questionnaires were utilized for assessing implicit positive and negative affect (IPA and INA), explicit emotional coping abilities to identify, understand, and regulate others' emotions, and the adaptive status of children at school.
Results Hierarchical regression analyses showed that higher IPA at T1 was associated with higher explicit emotional coping and motivation for learning at T2. Also, higher INA at T1 was related to better peer relationship at T2. Moreover, higher IPA and INA at T1 were concerned with higher scores of classroom climate and approval at T2.
Conclusion This study suggested that higher IPA leads to higher explicit emotional coping with others' emotions. Also, it suggested that higher implicit affectivity (i.e., both higher IPA and INA) causes more adaptive status of children at school.
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Psychoneuroimmunology

EW417

Oxidative DNA damage is associated with antidepressant use, not depression or anxiety disorders

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Introduction Oxidative stress has been implicated in the pathophysiology of depression and anxiety disorders and may be influenced by antidepressant use.
Objectives This study investigated the association of oxidative stress, measured by plasma levels of F2-isoprostanes and 8-hydroxy-2′-deoxyguanosine (8-OHdG), reflecting oxidative lipid and DNA damage respectively, with major depressive disorder (MDD), generalized anxiety disorder, social phobia, panic disorder, agoraphobia and antidepressant use in a large cohort.
Methods Data was derived from the Netherlands Study of Depression and Anxiety including patients with current ($n = 1641$) or remitted ($n = 610$) MDD and/or anxiety disorder(s) (of which $n = 709$ antidepressant users) and 633 controls. Diagnoses were established with the Composite Interview Diagnostic Instrument. Plasma 8-OHdG and F2-isoprostanes were measured using

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UHPLC-MS/MS. ANCOVA was performed adjusting for sampling, sociodemographic, health and lifestyle variables.
Results F2-isoprostanes did not differ between controls and patients, or by antidepressant use. Patients (current or remitted) using antidepressants had lower 8-OHdG (adjusted mean 38.3 pmol/L) compared to patients (current or remitted) without antidepressants (44.7 pmol/L) and controls (44.9 pmol/L, $P < 0.001$; Cohen's d 0.26). Findings for 8-OHdG were similar over all disorders and all antidepressant types (SSRIs, TCAs, SNRIs; $P < 0.001$).
Conclusion Contrary to previous findings this large-scale study did not find increased oxidative stress measured by F2-isoprostanes or 8-OHdG in MDD or anxiety disorders. 8-OHdG levels were lower in antidepressant users, which suggests antidepressants may have antioxidant properties.
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EW418

Antioxidant uric acid is lower in current major depression and anxiety disorders

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Introduction It has been hypothesized that lowered antioxidant capacity, which leads to increased oxidative stress, may be involved in the pathophysiology of major depressive disorder (MDD) and anxiety disorders and might be altered by antidepressant treatment.
Objectives This study investigated the association of plasma uric acid, the greatest contributor to blood antioxidant capacity, with MDD, generalized anxiety disorder, social phobia, panic disorder, agoraphobia and antidepressants in a large cohort.
Methods Data was derived from the Netherlands Study of Depression and Anxiety including patients with current ($n = 1648$) or remitted ($n = 609$) MDD and/or anxiety disorder(s) (of which $n = 710$ antidepressant users) and 618 controls. Diagnoses were established with the Composite Interview Diagnostic Instrument. Symptom severity was ascertained in all participants with the Inventory of Depressive Symptoms and the Beck Anxiety Inventory. ANCOVA and regression analyses were adjusted for sociodemographic, health and lifestyle variables.
Results Plasma uric acid was lower in those with current MDD and/or anxiety disorder(s) (adjusted mean 270 μmol/L) compared to those with remitted disorders (280 μmol/L, $P < 0.001$) or to controls (281 μmol/L, $P < 0.001$; Cohen's d 0.14). Within patients antidepressants were not associated with uric acid levels. Increasing symptom severity was associated with lower uric acid levels for both depression ($\beta = -0.05$, $P = 0.001$) and anxiety symptoms ($\beta = -0.05$, $P = 0.004$).
Conclusion This large scale study finds that the antioxidant uric acid is lower in current, but not remitted, MDD or anxiety disorders and in persons with higher symptom severity, suggesting disturbances in redox homeostasis play a role in the pathophysiology of depression and anxiety disorders.
Disclosure of interest The authors have not supplied their declaration of competing interest.

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EW419

Interleukin-receptor antagonist (IL1-RA) with respect to schizophrenia psychopathology

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Introduction The influence of the immune deregulation on the risk and psychopathology of schizophrenia is increasingly recognized in the literature.
Aim To assess the association between serum IL-1RA on schizophrenia psychopathology.
Methods We recruited 88 schizophrenia patients (38 males and 49 females, mean age 38.12 ± 12.67 years) and 88 healthy adult control subjects (68 males, 20 females, mean age 40.63 ± 7.99 years). Lifetime psychopathology was evaluated using Operational Criteria for Psychotic Illness (OPCRIT) checklist, while current psychopathology was assessed using Positive and Negative Syndrome Scale (PANSS). Serum samples were stored in aliquots at −80 °C. Serum levels of IL1-RA were measured using Immunoassay (ELISA).
Results There were statistically significant differences between schizophrenia patients and healthy controls (median ± interquartile range: 350,81 ± 227.04 and 888.74 ± 762.63, respectively [pg/ml]) (U Mann–Whitney test, $Z = -7.99$, $P < 0.0001$). There were no differences in serum IL1-RA levels between male and female among patients with schizophrenia (U Mann–Whitney test, $Z = -0.22$, $P = 0.82$) nor among healthy control subjects (U Mann–Whitney test, $Z = -0.17$, $P = 0.86$). Among schizophrenia patients, there was a trend-level association between IL-1RA serum level with negative symptoms (Spearman correlation coefficient, $r = -0.23$, $P = 0.056$), positive symptoms (Spearman correlation coefficient $r = -0.22$, $P = 0.066$), and on a statistically significant level with general symptoms (Spearman correlation coefficient $r = -0.28$, $P = 0.018$).
Conclusion Serum IL1-RA level is higher in schizophrenia patients in comparison to healthy controls and it is associated with schizophrenia psychopathology.
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EW423

Immunomodulatory role of paliperidone in the poly(I:C) model of schizophrenia

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Introduction Alterations on the innate inflammatory response may underlie the pathophysiology of psychiatric diseases, but the mechanisms implicated remain elusive. Current antipsychotics