

units in Sfax and Tunis, Tunisia. These participants, randomly chosen, were asked to answer a questionnaire after their consent. Depressive symptoms were evaluated using the “Beck Depression Inventory” (BDI).

**Results** The mean age of participants was 39.84 years. Among them, 38.6% had a low educational level (illiterate or primary school level); 45.3% were professionally inactive and 92.9% had a low to medium socio economic level. Medical, psychiatric and suicide attempt histories were reported respectively in 51.2%, 7.6% and 1.8% of cases. According to BDI, a mild depression was noted in 22.9%; moderate 16.1%; severe 4.1%. Among those presenting a moderate to severe depression (MSD), only 16.8% were followed up in psychiatry, 4.2% were receiving antidepressant and 9.8% benzodiazepine. MSD was associated with low educational level ( $P < 0.001$ ); low to medium socio economic level ( $P < 0.001$ ); psychiatric histories ( $P < 0.001$ ); suicide attempt histories ( $P < 0.001$ ); somatic histories ( $P < 0.001$ ).

**Conclusion** Our study highlighted a high prevalence of depression that is still under diagnosed and therefore poorly managed. General practitioners should be made aware of the importance of screening for depression in medical patients because it not only complicates their overall medical treatments, but also impedes their physical and social functioning.

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#### EV0430

### Depressive symptoms among genders

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**Introduction** Depression is one of the most well-known psychological issues and is among the most severe ones. World Health Organisation's (WHO) report on health identifies 1.9% lifetime prevalence of depressive episode for males and almost twice as high–3.2% for females.

**Methods** This study aimed to map the depressive symptoms among working population in Czech Republic.

**Results** Analysis of covariance showed that there is significant effect of age  $F(52) = 6.58, P = 0.010$  and gender  $F(52) = 12.53, P < .001$  and t-tests showed the means of BDI II scores were significantly different for genders with females having higher mean (11.91) than males (9.80),  $t(1025) = -3.42, P < .001$ .

**Conclusion** The clinical burden of depression is still an increasing one in today's society and this research helped to identify the potentially most vulnerable individuals. These seem to be working women aged 35–44.

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#### EV0431

### Core self-evaluation and depression among caregivers of Alzheimer disease patients

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**Introduction** Caregivers of Alzheimer Disease (AD) patients suffer from chronic stress and psychophysical burden, which often lead to depression symptoms. It seems that core self-evaluation (CSE), coping with stress and social support might be modifying factors in coping with situation of caregiving.

**Aims** The aims of the study were to examine: (1) level of depression; (2) relationships between CSE, style of coping with stress, social functioning and depression severity among caregivers.

**Methods** The study involved 60 caregivers of AD patients who were children of the sick and have been caring for at least one year. It was cross-sectional and assessed by questionnaires. Following tools were used: Core Self-Evaluation, Beck Depression Inventory, Coping Inventory for Stress Situations, Distress Thermometer and an original questionnaire assessing the situation of caregiving.

**Results** A total of 51.7% of responders demonstrated severity of depression symptoms, associated to at least one mild clinical depression episode. The factors introduced to the model explained 65% variance of depression symptoms. Predictors of greater depression symptoms proved to be: low CSE ( $\Delta R^2 = 0.32; \beta = -0.12$ ), low social support ( $\Delta R^2 = 0.08; \beta = -0.27$ ), low life satisfaction ( $\Delta R^2 = 0.02, \beta = -0.26$ ), high levels of distress ( $\Delta R^2 = 0.12, \beta = 0.31$ ), coping style focused on emotions ( $\Delta R^2 = 0.12, \beta = 0.17$ ).

**Conclusions** In the area of caregivers' psychological assistance and depression therapy, interventions leading to increase of CSE and providing adequate social support that contributes to better care provision and maintaining proper self-image, should be taken into consideration.

**Disclosure of interest** The authors have not supplied their declaration of competing interest.

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#### EV0432

### Neurometabolic alterations in a depression-like rat model of chronic forced swimming stress using in vivo proton magnetic resonance spectroscopy at 7 T

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Although recent investigations of major depressive disorder (MDD) have focused on the monoaminergic system, accumulating evidence suggests that alternative pathophysiological models of MDD and treatment options for patients with MDD are needed. Animals subjected to chronic forced swim stress (CFSS) develop behavioral despair. The purpose of this study was to investigate the *in vivo* effects of CFSS in the rat prefrontal cortex (PFC) with 7 T and short-echo-time proton magnetic resonance spectroscopy (<sup>1</sup>H MRS). Ten male Wistar rats underwent 14 days of CFSS, and *in vivo* <sup>1</sup>H MRS and forced swim tests were performed before and after CFSS. Point-resolved spectroscopy was used to quantify metabolite levels in the rat PFC. The spectral analyses showed that *in vivo* <sup>1</sup>H MRS can be used to reliably assess the Glu system. The rats showed significantly increased immobility times and decreased climbing times in the FST after CFSS, which suggested that the rats developed behavioral despair. The pre-CFSS and post-CFSS Glu and Gln levels did not significantly differ ( $P > 0.050$ ). The levels of myo-inositol, total choline, and N-acetylaspartate, myo-inositol/creatinine, and total choline/creatinine increased significantly ( $P < 0.050$ ). Similar findings have been reported in patients with MDD. Taken together, these results suggested that the CFSS-induced metabolic alterations were similar to those found in patients and that high-field and short-echo-time *in vivo* <sup>1</sup>H MRS can be used to investi-

gate depression-induced metabolic alterations. Such investigations might provide alternative insights into the nonmonoaminergic pathophysiology and treatment of depression.

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## e-Poster Viewing: E-mental Health

### EV0433

#### **Efficacy of an active implementation process of a computerized CPG of major depression disorder in primary care**

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*Introduction* The application of scientific evidence in clinical practice management of Major Depressive Disorder (MDD) is complex. Generally, the usual dissemination process and implementation of Clinical Practice Guidelines (CPG) induce modest changes. A computerized version of a Clinical Practice Guideline for Major Depression (e-CPG-MD) has been integrated in Electronic Clinical Records of Primary Care in Catalonia (Spain). It offers an opportunity to improve clinical results. The design allows access to precise help in the visit itself, improving diagnosis, treatment and follow-up.

*Objectives* To evaluate the effects of a multifaceted implementation process of e-CPG-MD, analysing their use and changes in MDD diagnosis.

*Methods* A cluster randomized clinical trial was performed in 10 primary care centers (PCC) in Barcelona. In five of ten centers, a multifaceted implementation process of the e-CPG-MD was developed during 6 month. The active process includes: interactive training program, regular feedback audit, educational outreach visits and periodic reminders.

*Results* The multifaceted implementation of e-CPG-MD was associated with a significant increase in use during the first 6 months (4.1%+3.1% vs. 52.7%+7.3%,  $P<0.001$ ). In the active centers, the MD diagnosis increased significantly (rate quotient = 1.56,  $P<0.001$ ) and the proportion of moderate and severe MD increased (13.6% vs 41.1%,  $P=0.002$ ).

*Conclusions* A multifaceted implementation method of e-CPG-MD increased significantly its use in active centers at 6 months. Diagnosis of MDD and the proportion of moderate and severe cases also increased significantly.

*Disclosure of interest* The authors have not supplied their declaration of competing interest.

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### EV0434

#### **Using digital mood monitoring technology to support the assessment, engagement and empowerment of young people presenting to mental health services with mood instability**

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*Background* Digital mood-monitoring technology, such as mood-monitoring applications, is increasingly advocated within clinical research and is a potentially effective method to engage and empower youth. However, limited evidence is available on this type of technology.

*Objectives* (1) To assess the evidence for the use of mobile mood-monitoring applications in youth; (2) to explore what available smartphone application would be most suitable to monitor mood from the perspective of young people; (3) to examine whether mood-monitoring applications are useful for investigating mood instability in youth; (4) to explore the utility and acceptability of using the mood-monitoring application from young people's and clinicians' perspectives.

*Aim* To investigate how mood-monitoring applications can be used to support the assessment, engagement and empowerment of young people presenting to mental health services with a range of diagnoses in which mood instability forms a key component.

*Methods* A systematic review using a Cochrane methodology was conducted. After obtaining ethical approval, this study will also employ a mixed methods approach, through which quantitative findings (e.g., digital mood-monitoring data) will be furnished with an in-depth understanding of young people's views on digital mood-monitoring technology.

*Results* Findings from a systematic review focusing on the evidence for the psychometric properties, usability and clinical impacts of applications in youth will be presented. Preliminary results from consultations groups and plans for future research will also be discussed.

*Conclusions* Evidence acquired through this research can potentially influence mental health policies and result in more innovative (adjunct) interventions and improved outcomes for young people with mood instability.

*Disclosure of interest* The authors have not supplied their declaration of competing interest.

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### EV0435

#### **The ICT4LIFE Project—Design and development of a new information technology platform for patients with Alzheimer's disease**

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*Aim* With an increasingly growing population in Europe, cognitive impairment is a major social and health issue. According to the World Alzheimer Report (WHO, 2014), dementia, including Alzheimer's disease is one of the biggest global public health challenges our generation is facing. There are many efforts at European level to promote active and healthy ageing. This three-year project has the ambition to provide new services for integrated care with breakthrough research and radical innovation by employing user-friendly Information and Communication Technology (ICT)