

## EV0365

**Validation of the Tunisian version of the patient health questionnaire (PHQ-9)**H. Belhadj<sup>1,\*</sup>, R. Jomli<sup>2</sup>, U. Ouali<sup>2</sup>, Y. Zgueb<sup>2</sup>, F. Nacef<sup>2</sup><sup>1</sup> Military hospital, psychiatry, Tunis, Tunisia<sup>2</sup> Razi Hospital, psychiatry, Manouba, Tunisia

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**Introduction** The PHQ-9 has been recommended as the best available screening and case-finding instrument for primary care based on its brevity, and ability to inform the clinicians on both depression severity and diagnostic criteria.

**Objective** Our study evaluated the reliability and the validity of the Tunisian version of the PHQ-9 in detecting major depression in general population.

**Method** We undertook a cross-sectional and analytical study. A total of 134 participants, representative of the Tunisian general population, were enrolled. The PHQ-9 was validated against the HAD reference standard. The types of validity determined for the PHQ-9 in this study were: translation validity, internal reliability and criterion validity.

**Results** Test-Retest reliability was determined by intraclass correlation. This scale is stable over 2 weeks (ICC = 0.97). The Tunisian version of the PHQ-9 was found to have good internal reliability (Cronbach's alpha = 0.84). As for criterion validity of the PHQ-9, the Pearson's correlation coefficient between the PHQ-9 and HAD was 0.94 and the Spearman's correlation coefficient was 0.81. This indicated a positive association of good strength between the two instruments. A cut-off score of 10 or higher on the PHQ-9 had a sensitivity of 86.2 and a specificity of 83.8. The VPP was 0.6 and the VPV was 0.9.

**Conclusion** The Tunisian version of the PHQ-9 has several potential advantages. It was found to be a valid and reliable casefinding instrument for detecting depression in general population.

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

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## EV0366

**Prevalence of depression in Tunisian general population**H. Belhadj<sup>1,\*</sup>, R. Jomli<sup>2</sup><sup>1</sup> Military hospital, psychiatry, Tunis, Tunisia<sup>2</sup> Razi Hospital, psychiatry, Mannouba, Tunisia

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**Introduction** Depression is a major burden for the health-care system worldwide.

**Objective** To identify prevalence and severity of depression in Tunisian general population and define socio-demographic characteristics of screened positive to depression participants.

**Method** We undertook a cross-sectional and descriptive study. A total of 134 participants, representative of the Tunisian general population, were enrolled. Age, gender, and educational level were the major criteria for representativeness. Depression was assessed with the Patient Health Questionnaire (PHQ-9).

**Results** The cut-off score was 10. The prevalence of depression was 13.4%. There were no statistical difference in gender, education and age for the prevalence of depression.

**Conclusion** The World Health Organization ranks depression as the fourth leading cause of disability worldwide. Thus, the detection of depression and the dissemination of treatment in the general population are very important to reduce the burden of the disease.

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

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## EV0367

**Anxiety and depression at the medical students in post-examination**

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**Introduction** The course of medical studies is a long route asking for a lot of breath. It is enclosed by the national examination for specialisation, which allows to access professional training. This examination requires a diligent preparation over several months in difficult conditions for the most part of the candidates who are in practical training.

**Objectives and aims** We suggest estimating the degree of anxiety and depression at the candidates in the week following the national examination for specialization of 2016.

**Methods** We have put online on the pages of the various Tunisian Faculties of Medicine an anonymous questionnaire intended for the candidates who took the national examination for specialization of 2016. We used the scale HAD (Hospital Anxiety and depression scale).

**Results** We recruited 220 participants. More or less half of the participants declare to be rather often in a good mood, that they take little only of the pleasure in the same things as before, that they laugh and see the highly-rated voucher of things really less than before, that they are made of the concern very often and that they sometimes experience sensations of fear. A third of the participants feel tense or irritated most of the time feel sudden sensations of panic rather often and have the impression to work in slow motion rather often.

**Conclusion** Taking the national examination of specialization rhymes with stress and anxiety. It leads us to question: is it necessary to assure a psychological coverage during the preparation and upstream of the competition?

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## EV0368

**Depression, anxiety and stress [DASS21] symptoms in menopausal Arab women: Shedding more light on a complex relationship**

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**Aim** The objective was to determine correlation between depression, anxiety and stress in menopausal and post-menopausal women and shedding more light on a complex relationship.

**Methods** A cross-sectional based on Arabian women at the Primary Health Care (PHC) Centers in Qatar during July 2012 and May 2014 and 1101 women agreed to participate and responded to the study. Depression, anxiety and stress were measured using the Depression Anxiety Stress Scales (DASS-21). Data on body mass index (BMI), clinical and other parameters were used.

**Results** The mean age and SD of the menopausal age was  $49.55 \pm 3.12$ , and postmenopausal age was  $58.08 \pm 3.26$  ( $P < 0.001$ ). There were statistically significant differences between menopausal stages with regards to age, ethnicity, educational status, occupation status, and place of living. Also, there were statistically significant differences between menopausal stages with regards to BMI, systolic and diastolic blood pressure, vitamin D deficiency, and diseases. Depression and anxiety were more common among postmenopause women. The multivariate regression analyses revealed that age in years, diastolic BP, consanguinity, regular exercise were predictor for depression. Meanwhile, diastolic BP, occupation and physical activity considered the main risk factors for anxiety. Furthermore, age in years, occupation and

sheesha smoking habits were considered as the main risk factors associated with stress.

**Conclusion** A large number of factors were associated with experiencing menopausal and psychosocial problems and which had negative effects on the quality of life among Arabian women. Depression, anxiety and stress should be considered as an important risk factors for osteoporosis.

**Disclosure of interest** The author has not supplied his/her declaration of competing interest.

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#### EV0369

### Biomarkers of depressive disorders: A multiplex analysis of blood serum

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Depressive disorders are a great burden for individual patients and society. Blood-based biomarkers are regarded as a feasible option for investigation of depressive disorders. Several potential biomarkers for depression were selected. We studied the following serum markers: cortisol, melatonin, brain-derived neurotrophic factor (BDNF), prolactin, insulin-like growth factor 1 (IGF-1),  $\beta$ -endorphin, orexin A. The patient sample consisted of 78 persons with depressive disorders. Patients were divided into two groups: 46 patients with a first depressive episode and 32 patients with recurrent depressive disorder. Control group consisted of 71 healthy individuals of corresponding age and sex. All markers were measured in serum using MILLIPLEX<sup>®</sup> MAP panels (Merck, Darmstadt, Germany) by analyzer MAGPIX (Luminex, USA). Statistical analyses were performed using SPSS software. Results were expressed as median and quartile intervals [Q1–Q3]. There was a significant increase of serum concentrations of cortisol (663.69 [467.5–959.49] nmol/L,  $P < 0.001$ ) and melatonin (66.31 [33.6–132.59] pg/mL,  $P = 0.029$ ) in patients compared with the control group (526.1 [367.24–654.7] nmol/L and 45.11 [27.47–73.47] pg/mL). In addition, correlations were found between potential biomarkers, clinical indicators and treatment response measured by applying the Hamilton Depression rating scale and the Clinical Global Impression rating scales. A significant correlation was found between the concentration of prolactin and high response to pharmacotherapy ( $r = -0.267$ ,  $P = 0.029$ ). Identifying biomarkers that can be used as diagnostics or predictors of treatment response in people with depressive disorders will be an important step towards being able to provide personalized treatment.

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#### EV0370

### In patients with major depressive disorders, depression, stress axis activity and problem solving skills as a proxy of executive functions are unrelated

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**Introduction** Major depressive disorders (MDD) are among the most prevalent psychiatric disorders worldwide. While there is abundant literature showing that an increased cortisol secretion, understood as a proxy of the deteriorated hypothalamus-pituitary-adrenocortical axis activity (HPA AA), and poor cognitive performance are tightly related, less is known as regards to the HPA AA and higher cognitive information processes such as problem solving.

**Aims** Investigating the association between cortisol secretion and problem solving performance among patients with MDD.

**Methods** Fifteen inpatients with MDD (HDRS > 24; mean age: 59 years; 80% females) underwent a pharmacologic HPA AA challenge both at baseline and six weeks later to assess the cortisol secretion. They were treated with standard antidepressants at therapeutic dosages. Further, they learned how to solve the Tower-of-Hanoi problem-solving task (ToH-PS-T) and how to apply the problem solving strategy to other tasks (transfer). Testing occurred both at baseline and six weeks later. Outcome variables were symptoms of depression, cortisol secretion and the performance to transfer the acquired ToH-PS-T.

**Results** Both symptoms of depression and cortisol secretion decreased over time, and transfer performance increased over time. Neither at baseline nor six weeks later, symptoms of depression, transfer performance and cortisol secretion were statistically related.

**Conclusions** The pattern of results suggests that cortisol secretion as a proxy of physiological stress regulation, symptoms of depression, and higher order cognitive performances seem unrelated. Given that cognitive information processing performance substantially increased regardless from depression and cortisol secretion, problem-solving skills need to be focused separately.

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

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#### EV0371

### Poststroke depression

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Psychiatric symptoms are the complications most often ignored in patients who suffered a stroke. Depression is the most common psychiatric complication in post-stroke patients with a prevalence of about 20–50% in the first year and with a peak in first six months after the stroke. Depression in turn, constitutes itself a factor of cerebrovascular risk. Despite its high prevalence this disorder remains under diagnosed and under treated. One explanation for this fact is that depressive symptoms are often misinterpreted as consequences of stroke itself. This reality is even more striking in patients with aphasia. Poststroke depression (PSD) results from the interaction between biological, as the location of the stroke, social and psychological factors. The presence of this disorder is associated with deleterious consequences for rehabilitation process. These patients suffer more often from attention deficits, cognitive difficulties, lower response to rehabilitation programs, poor quality of life and increased mortality.