#### **EW32**

## Initial usability and feasibility evaluation of the SIMPLe Smartphone application to monitor and psychoeducate bipolar patients

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Background The SIMPLe project was designed with the aim of developing a smartphone application (i.e. app) to monitor and psychoeducate subjects with bipolar disorder through highly personalized messages from both passive and active data. The project was based on a face-to-face group program, which has an increasing scientific evidence of its efficacy and cost-effectiveness reducing bipolar disorder relapses.

Aims An initial feasibility study was conducted to evaluate the usability and satisfaction of an Android version of the SIMPLe app 1.0.

Methods The SIMPLe feasibility study was conducted from March 2015 to June 2015. The participation in the study was offered to a consecutive sample of adult patients diagnosed of bipolar disorder I, II or NOS (not otherwise specified) attending the outpatient mental health clinic of the Hospital Clinic of Barcelona, Spain.

Results The participation in the study was offered to 72 stable bipolar patients. Forty-three subjects were enrolled in the study. Since the day the patients were enrolled in the study, the rate of completed tests was 0.74 per day and 1.13 per week. Nine emergency alerts were received through the application and notified to the reference patients' psychiatrists. Ninety-five percent of the initial participants remained actively using the app and no relapses were identified during the 3 months of the study.

Conclusion These preliminary results suggest a high feasibility of the SIMPLE app based on the rates of tasks completed and retention. Disclosure of interest The authors have not supplied their declaration of competing interest.

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#### **EW33**

# Neurocognitive impairments in euthymic patients with bipolar disorder type II

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Introduction Most of the studies have indicated that there have been neurocognitive impairments especially in the domains of executive functions, attention, verbal and working memory among euthymic patients with bipolar disorder type I (BD-I). However, there has been limited research investigating neurocognitive functioning in euthymic patients with BD-II.

Objectives/aims Aim of this study was to investigate neurocognitive functions in euthymic BD-II patients. Our hypothesis was that euthymic BD-II patients would have neurocognitive impairments in the domains of executive functions, attention, verbal and working memory.

Methods Euthymic BD-II patients (n=37) and healthy controls (HC) (n=35) were compared in terms of their neurocognitive functioning in the domains of executive functions assesed by the number of perseverative errors, non-perseverative errors and category completed on the Wisconsin Cart Sorting Test (WCST);

working memory assessed by Auditory Consonant Trigrams (ACT); immediate verbal memory assessed by the Logical Memory subscale of the Wechsler Memory Scale I (WMS I) and attention assesed by Stroop Colour-Word Interference Test (SCWIT). Euthymic state was confirmed by the low scores both on Hamilton Depression Rating Scale. Young Mania Rating Scale.

Results Significant differences were found between two groups in terms of WCST non-perseverative errors (Z=3.8, P<0.01) and category completed subtests (Z=3.8, P<0.01), ACT (t=2.97, P<0.01) WMSI (Z=2.4, P=0.01), SCWIT (t=3.52, P<0.01) performances.

Conclusions Our study indicated that euthymic BD-II patients had poorer performance on the domains of executive functions, attention, working memory and verbal memory than the HC group. But future studies with large samples are needed to support our results. Disclosure of interest The authors have not supplied their declaration of competing interest.

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#### **EW35**

# Subthreshold symptoms in bipolar disorder: Impact on quality of life

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Introduction Several studies have analyzed the influence of bipolar disorder (BD) related to many kinds of functioning. Even if it is obvious that patients in relapse have poor quality of live (QoL), what's about it in interictal phases with subthreshold symptoms? Aims To study the potential relationship between QoL and subthreshold symptoms in bipolar I patients in remission.

Objective To evaluate the above relationship, we hypothesized that subsyndromic BD phases can be related to worse subjectively OoL.

Methods This was a cross-sectional study. Forty-four BD patients were enrolled. The subthreshold symptoms were evaluated by Hamilton Depression Rating Scale (HDRS) and Young Mania Rating Scale (YMRS). Patients with HDRS lower than 7 and YMSR lower than 6 were the successful applicants. Then, we run the Tunisian version of SF-36 to measure the QoL.

Results Twenty-seven men and seventeen women with an average age of 39.3 years were selected. Age of beginning of BD was 31.5 years and patients were in relapse since 1.56 years. The HDRS's average score was 2.73. Twenty patients (45.5%) have an HDRS upper than 4. The YMRS's average score was 2.25 and twenty-nine BD's patients have a score between 1 and 6. The overall average score at SF-36 scale were 64.2 and 25% of BD patient with subthreshold symptoms had a poor OoL.

Conclusions Subsyndromic interictal phases affect the QoL of BD patients and it's necessary to introduce therapy adapted according to troubles in order to improve patient's quality of life and functioning.

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#### **EW36**

## First bipolar episode and functionality: Relation with depressive symptoms and inflammation levels

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Introduction It is important to make an early and effective intervention from the first bipolar episode. The presence of depressive symptoms in the course of a manic episode could influence negatively the evolution and the prognosis of the patient. Inflammation and oxidative stress are also related with functionality.

Objectives To explore the relationship between depressive symptoms during a first episode of mania, inflammatory parameters and patient functionality during the follow-up.

Method We included in the study 92 are patients with a first manic episode and 92 matched healthy controls. We compared 13 inflammatory/oxidative stress parameters measured at baseline (TFN $\alpha$ , IL6, PGE2, MCP1, TBARS, NO2, SOD, CAT, GSHTOT, GSSG, GSHfree, GPx, TAS) between both groups. Between patients, 46 presented pure mania (PM) (no depressive symptoms) and 46 mixed mania (MM) (with depressive symptoms). We explored the influence of inflammatory factors in functionality, exploring differences between PM and MM. To measure patients' general functioning one year after illness onset, we used the Functional Assessment Short Test (FAST).

Results We found significant differences in TFN $\alpha$ , MCP1 and TBARS (higher in patients) and in SOD, GSHtot, GSSG, GSHfree, GPx and TAS levels (lower in patients). Only In MM group, there was a significant influence of SOD and GSHfree in FAST scores suggesting that a higher antioxidant levels at baseline the patient functionality improves one year after.

Conclusions Some parameters of oxidative stress at baseline are related with patient's functionality one year after the first episode of mania, but only when mania debuts with depressive symptons simultaneously.

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#### **EW37**

#### Aspects of sexuality in bipolar women

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Introduction In spite of more studies dedicated to the topic of sexual disorders among schizophrenic patients or to the sexual effects of antipsychotics and antidepressants, few studies entangle broadly the issue of sexual attitudes and behaviors of bipolar patients, due partly to the heterogeneity of the disorder and the variety of episodes, and treatments.

*Objectives* To establish if special sexual patterns are specific to depressive or manic episodes and if the sexual disorders are related to the severity of the mood episodes.

Aims To compare depressive, manic, and matched controls regarding their sexuality.

Methods The current study is an observational cross sectional study, carried out on 173 women, among them 112 bipolar, diagnosed according to ICD-10 criteria (81 depressive, and 31 manic), and 61 controls. All subjects fulfilled the Sexual Disorders Interview (SDI), Female Sexual Function Index (FSFI) and to bipolar patients BDI, YMRS have been administered.

Results Female bipolar patients were significant less sexual active than controls, depressive women being less interested in sexuality than manic patients; there were not significant differences between the two patients' samples regarding the frequency of sexual intercourse, degree of psychopathology. Sexual problems on FSFI were detected in 75% of bipolar patients, both bipolar groups emphasizing difficulties in arousal, lubrication and sexual satisfaction.

Conclusions The issue of sexual problems in bipolar female patients is delicate to investigate and often neglected, being difficult to ascertain to the mood disorder itself or to different treatments the patients have been exposed to, or to stigma.

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#### **EW38**

# A peripheral composite proteomic and gene expression biomarker related to diagnosis and affective state in rapid cycling bipolar disorder

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Introduction Management of bipolar disorder is limited by absence of laboratory test. While alterations related to multiple biological pathways have been found in bipolar disorder, findings have not translated into clinically applicable biomarkers. We previously found promise for a combined gene expression biomarker. The combination of gene expression and proteomic biomarkers could have potential as a meaningful clinical test.

*Objectives* To identify a composite biomarker based on multiple potential peripheral biomarkers related to neuroplasticity, inflammation and oxidative stress, both on a proteomic and gene expression level.

Aims To test the ability of a composite biomarker to discriminate between bipolar disorder patients and healthy control subjects and between affective states in bipolar disorder patients.

Methods mRNA expression of a set of 19 candidate genes and protein levels of immune markers and neurotrophic factors were measured in peripheral blood mononuclear cells and combined with urinary levels of oxidized nucleosides of 37 rapid cycling bipolar disorder patients in different affective states (depression, mania and euthymia) during a 6–12-month period and in 40 age- and gender-matched healthy control subjects. A composite measure was constructed in the first half of the sample and independently validated in the second half of the sample. The composite measure was evaluated using ROC curves and by calculating sensitivity and specificity.

*Results* Statistical analysis is ongoing. Results will be presented at the congress.

Conclusions A peripheral composite biomarker based on multiple biological pathways on both proteomic and gene expression levels may have potential as a clinically applicable biomarker.

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