

**Introduction:** Isolation, life changes and increased stress lead to widespread concerns about the effects of the Covid-19 pandemic on psychiatric patients. The rise in depressive disorders is one of the negative effects associated directly and indirectly to the pandemic.

**Objectives:** The purpose of this study was to investigate the impact of the COVID-19 pandemic on the prevalence of depressive disorders among the patients admitted to our hospital. The state of pandemia was declared on the 11th of March but it had already become a main stream media subject in our country at the beginning of the month with real life changes for our citizens.

**Methods:** A retrospective study was performed at the Psychiatric Hospital 'Elisabeta Doamna' Galati, using the exact same period, between 01.03 and 30.09, in 2019 and 2020. ICD-10 criteria were used and patients with either F32.x, F33.x or F38.x as discharge diagnosis were included.

**Results:** In total, 7638 cases were admitted during the period in 2019, of which 751 (9,83%) had depressive disorders. In comparison with 2020 where out of 4050 admitted patients, the number had risen to 1034 (25,53%) a net increase in total number of cases by 37.6%.

**Conclusions:** Analysis of the data shows a 2.5 times increase in the percentage of depressive disorders among our patients. Even taking into account the lower admission rates, we have seen a clear shift in the psychiatric profile of the average patient and this has to be taken into consideration in the long and short term treatment of any psychiatric patient.

**Keywords:** Covid-19; Depressive disorders; Pandemic

## EPP0566

### The role of zinc, albumin, c reactive protein, and interleukin-6 in differentiation of unipolar depression and depression in bipolar disorder

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**Introduction:** There is no clinical difference between depressive episodes in bipolar disorder compared to major depressive disorder, which is why bipolar disorder remains unrecognized. Correctly distinguishing these disorders is of great importance because the therapeutic approach differs significantly. According to previous research, zinc, albumin, C reactive protein (CRP), and interleukin-6 (IL-6) seem to play a role in differentiating these two types of depressive episodes.

**Objectives:** To determine zinc, albumin, CRP and IL-6 serum concentrations in patients with major depressive disorder and depressive episode of bipolar disorder.

**Methods:** Research involved 60 participants. Participants signed informed consent prior to inclusion in the study. Sociodemographic data have been collected using a previously structured questionnaire. The severity of depressive symptoms has been measured by the Montgomery Asberg Depression Rating Scale (MADRS) and the Hamilton Depression Scale (HAM-D-17). Blood samples were obtained from each study participant's brachial vein, to determine zinc, albumin, C reactive protein and interleukin-6 serum concentrations.

**Results:** Statistically significant difference was found in zinc serum levels between the two analysed groups. In the overall sample, there is a significant positive correlation between the results on the rating scales and the serum level of CRP.

**Conclusions:** We confirmed an association between serum levels of CRP and the severity of the illness. Regardless, these are preliminary results of the research. Sufficient final conclusion cannot yet be drawn because it is being limited by the sample size and further investigation is needed.

**Keywords:** depression; bipolar disorder; C-reactive protein

## EPP0567

### The magnitude of depression in heart failure patients and its association with NYHA class

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**Introduction:** Depression is commonly present among HF patients and is associated with adverse clinical outcomes. However, research regarding its association with New York Heart Association (NYHA) class is still scarce.

**Objectives:** To evaluate the presence of depression symptoms in HF outpatients and analyze its association with NYHA class.

**Methods:** This study is part of a larger research project (Deus Ex-Machina/NORTE-01-0145-FEDER-00026). HF patients were recruited from an outpatient clinic at a University Hospital. Exclusion criteria were: unable to communicate, severe visual acuity deficit or NYHA class IV. Sociodemographic data and NYHA class were registered. The Patient Health Questionnaire-9 (PHQ-9) was used to assess depression, with a score  $\geq 10$  indicating clinically relevant depression.

**Results:** A sample of 136 HF patients was included, with a median age of 59 (range: 24-81) years old, where 66% were men. Almost half of the patients (49%) were in NYHA class II, followed by class I (36%) and class III (15%). The median score of PHQ-9 was 4 (range: 0-18), with 26% showing clinically relevant depression. PHQ-9 total score was associated with NYHA class ( $p=0.001$ ), with higher median scores in worse NYHA classes [class I: 3 (IQR: 5.5), class II: 4 (IQR: 8) and class III: 8.5 (IQR: 9.3)].

**Conclusions:** In this study, depression was present in 26% of HF outpatients and was associated with more severe HF symptoms. Consequently, preventing, monitoring, and treating depression in the management of these patients is recommended. Further research is needed for a deeper analysis of this association.

**Keywords:** NYHA class; heart failure; Depression

## E-mental health

## EPP0568

## Insideout project: Using big data and machine learning for prevention in psychiatry

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**Introduction:** Social Media might represent an amazing and valuable source of information on mental health and well-being. Several researches revealed that adolescents aged 13 to 17 years old go "online" daily or stay online "almost constantly".

**Objectives:** The aim of this project is to identify distress in pre-clinical stages using Social media screening methods. The system can be modelled to centre on different several health-related topics.

**Methods:** We created a digital system able to analyse scripts written by adolescents on Twitter. InsideOut works using machine learning techniques and computational linguistic items to catch significant and sense of written messages and it improves its performances with iterations. The system is able to automatically identify semantic information relevant to different topics: in this case "distress in teenagers".

**Results:** The task of our system is considered correct when it is able to identify triples of Life Event, Sentiment and Experience of a tweet in agreement with the Gold Standard established among the annotators. The system has around 70% of accuracy in identifying triples. The analysis has been carried out both in Italian and English collecting over 4 million Italian tweets and 30 million English tweets. Comparative analysis with self-report questionnaires show that tweet analysis is able to suggest similar statistics.

**Conclusions:** This study analyzed contents of messages posted on Social Media Twitter meta-dating them with psychological and health-related information. Using InsideOut, we can plan clinical intervention in district and regions where high levels of uneasiness are revealed.

**Keywords:** distress; prevention; machine learning; e-mental health

## EPP0569

## Pending challenges to e-mental health in the COVID-19 era: Acceptability of a smartphone-based ecological momentary assessment application among patients with schizophrenia spectrum disorders

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**Introduction:** Concerns have been raised about ecological momentary assessment (EMA) acceptability among patients with schizophrenia spectrum disorders (SSD), which is of major relevance during the e-Mental health-focused COVID-19 pandemic.

**Objectives:** To investigate i) the levels of adherence to a passive smartphone-based EMA tool, the Evidence-Based Behavior (eB2), among SSD patients; and ii) putative predictors of this.

**Methods:** Sample: SSD (F20-29-ICD10) outpatients, age 18-64, without financial incentives, recruited over 17/06/2019-11/03/2020 at the Hospital Universitario Fundación Jiménez Díaz (Madrid, Spain). Those who accepted the eB2 installation -users- and those who did not -non-users- were compared in sociodemographic, clinical, premorbid adjustment, neurocognitive, psychopathological, insight and metacognitive variables by a multivariable binary logistic regression model.

**Results:** Sample (N=77): n=41 males; age: 47.69±9.76 years, n=24 users (31.2%). n=14 users (70%) had the eB2 installed at follow-up (median=14.50 weeks).

Multivariable binary logistic regression model on 'user' as outcome						
	$\beta$	SE	Wald	p	OR	95% CI
Age	-0.075	0.038	3.910	0.048	0.928	0.861-0.999
Education level	-0.967	1.289	0.563	0.453	0.380	0.030-4.755
Early adolescence premorbid adjustment	-0.285	0.110	6.695	0.010	0.752	0.606-0.933
Trail Making Test A	-0.030	0.025	1.488	0.222	0.970	0.924-1.018
Trail Making Test B	-0.005	0.010	0.278	0.598	0.995	0.976-1.014
Cognitive Insight	0.062	0.061	1.043	0.307	1.064	0.944-1.200

$\chi^2=25.296$ , df=6,  $p<0.001$ . Nagelkerke- $R^2=44.7\%$ . Correctly classified: 76.9%, users:54.5%, non-users:88.4%.

**Conclusions:** Acceptability of a smartphone-based EMA application among SSD patients was low. Age (young) and good premorbid adjustment predicted acceptability. e-Mental Health methods need to be tailored for patients with SSD. Otherwise, these highly vulnerable individuals may be neglected by e-health-based services in the post-COVID-19 years ahead.

**Keywords:** Schizophrenia spectrum disorders; acceptability; ecological momentary assessment