

from another 10 people to determine how accurate the model would be with ten new individuals for whom it had not been developed.

**Results:** We defined success as a prediction of onset within 10% of the actual date and a prediction of the slope of the trend within 20%. We had 7 successes. We were able to engage 6 of the 10 in interacting with the model to change health behaviors.

**Conclusions:** Computer simulation modeling may provide an opportunity to study the long-term effects of health behaviors and to engage people in interacting with the program to change behavior.

**Disclosure:** No significant relationships.

**Keywords:** computer simulation modeling; cognitive impairment; prediction; major neurocognitive disorder

## Pain

### O200

#### The role of interoception in the mechanism of pain and fatigue in fibromyalgia and myalgic encephalomyelitis/chronic fatigue syndrome (ME/CFS)

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**Introduction:** Pain, fatigue and anxiety are common features of fibromyalgia and ME/CFS and significantly impact quality of life. Aetiology is poorly defined but dysfunctional inflammatory, autonomic and interoceptive (sensing of internal bodily signals) processes are implicated.

**Objectives:** To investigate how altered interoception relates to baseline expression of pain, fatigue and anxiety symptoms in fibromyalgia and ME/CFS and in response to an inflammatory challenge.

**Methods:** Sixty-five patients with fibromyalgia and/or ME/CFS diagnosis and 26 matched controls underwent baseline assessment: pressure-pain thresholds and self-report questionnaires assessing pain, fatigue and anxiety severity. Participants received injections of typhoid (inflammatory challenge) or saline (placebo) in a randomised, double-blind, crossover design, before completing heartbeat tracking tasks. Three interoception dimensions were examined: subjective sensibility, objective accuracy and metacognitive awareness. Interoceptive trait prediction error was calculated as discrepancy between accuracy and sensibility.

**Results:** Patients with fibromyalgia and ME/CFS had significantly higher interoceptive sensibility and trait prediction error, despite no differences in interoceptive accuracy. Interoceptive sensibility and trait prediction error correlated with all self-report pain, fatigue

and anxiety measures, and with lower pain thresholds. Anxiety mediated the positive-predictive relationships between pain (Visual Analogue Scale and Widespread Pain Index), fatigue impact and interoceptive sensibility. After inflammatory challenge, metacognitive awareness correlated with baseline self-reported symptom measures and lower pain thresholds.

**Conclusions:** This is the first study investigating interoceptive dimensions in patients with fibromyalgia and ME/CFS, which were found to be dysregulated and differentially influenced by inflammatory mechanisms. Interoceptive processes may represent a new potential target for diagnostic and therapeutic investigation in these poorly understood conditions.

**Disclosure:** No significant relationships.

**Keywords:** Interoception; Pain; fatigue; Anxiety

## Personality and personality disorders

### O201

#### Do personality traits influence the stigmatizing attitudes toward people with mental illness? A web-survey among university students

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**Introduction:** People from the general population often tend to believe that psychiatric patients may be incurable, dangerous, and unpredictable. Stigma represents a critical issue which should be defeated. In spite of the interest of research, little is known about the relationship between personality traits and level of stigma toward people with mental illness.

**Objectives:** To evaluate whether certain personality traits can influence the level of stigma towards mental illness in a population of university students.

**Methods:** A web-survey was spread on social networks between March and June 2020 through Google Forms. Eligibility criteria for inclusion were: 1) Being 18 years of age or older; 2) Attending a degree course in an Italian University; 3) Provide informed consent. Socio-demographic characteristics of the participants were collected. Stigma was measured using the Attribution Questionnaire (AQ-27), personality traits were evaluated through the Big Five Inventory (BFI) and the Mental Health Knowledge Schedule (MAKS-i) investigated the knowledge about mental illness. Statistical analyses were performed using SPSS 24.0.

**Results:** We computed a multiple linear regression to calculate potential predictors of stigma, adjusted on the basis of the knowledge of mental illness. Results showed that age and faculty class were not related to stigma. Agreeableness (A) and Openness to experience (O) were associated with less stigmatizing attitudes. Conversely, Neuroticism (N) and Conscientiousness (C) seemed to predict higher levels of stigma.

**Conclusions:** Our results suggest an interesting relationship between personality traits and stigmatizing attitudes, which deserves

to be further studied. They also confirm the importance of implementing appropriate strategies against the stigma of mental illness.

**Disclosure:** No significant relationships.

**Keywords:** personality traits; Stigma; University Students; big five inventory

## O202

### Triple network in adolescents with borderline personality disorder, early traumatic experiences and dissociative symptoms: An eloreta study

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**Introduction:** Triple Network Model (TNM), which considers the dynamic interaction between Default Mode (DMN), Salience (SN), and Central Executive (CEN) networks, explains clinical features in mental disorders from a neurophysiological perspective. Some studies highlight the increased connectivity in TNM in adults with Borderline Personality Disorder (BPD), but little is known about adolescents.

**Objectives:** The aim of our preliminary study was to investigate TN functional connectivity (FC) in BPD adolescents with a history of traumatic experiences, and its correlation with dissociative symptoms.

**Methods:** 15 BPD adolescents (DSM-5 criteria) with early traumatic experiences were compared to 15 healthy controls, matched for sex and age. Dissociation Questionnaire (DIS-Q) was administered. Eyes-closed resting-state (RS) EEG recordings were performed (19 electrodes; 10-20 system) and analyzed using Exact Low-Resolution Electromagnetic Tomography software (eLORETA). FC was computed for all frequency bands and 9 Regions of Interest for TNM.

**Results:** BPD adolescents showed a hyper-connection between CEN and DMN [dorso-lateral prefrontal cortex (dlPFC) and posterior cingulate cortex (PCC); PCC and left posterior parietal cortex (PPC)] and within the CEN (left and right PPC). The strength of PCC-dlPFC and left-right PPC connections was correlated with dissociative symptoms severity.

**Conclusions:** FC alterations can already be identified in BPD adolescents, supporting the need for early diagnosis. Normally DMN and CEN show opposite functioning. In our BPD adolescents, the absence of this “anti-correlation” reflects the typical confusion between internal and external mental states, which clarify their difficulties in metacognition or mentalization. Moreover, in dissociative symptoms, two CEN nodes are also involved, not only DMN as previously described.

**Disclosure:** No significant relationships.

**Keywords:** Borderline personality disorder; triple network; adolescents; eeg functional connectivity

## O203

### Study retention prediction with AI

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**Introduction:** Openness, conscientiousness, extroversion, agreeableness and neuroticism are dimensional personality traits known as the Big Five. Study attrition is a common but often hard to anticipate problem. Artificial intelligence (AI) could examine both fronts to mitigate the unpredictability of the latter.

**Objectives:** To investigate whether AI could predict study attrition employing personality traits scores.

**Methods:** Data from 2,697 questionnaires were analysed using an AI. The short form of the International Personality Item Pool was used to assess the Big Five personality traits on the first of three planned waves. The personality traits scores were employed to predict the missing of at least one wave. Overall attrition was 17.6%. The AI was conservatively tuned to minimize the negative likelihood ratio when confronting predicted and real attrition. The free and open source programming language R was used for all the analyses. Dataset source: Hansson, Isabelle; Berg, Anne Ingeborg; Thorvaldsson, Valgeir (2018), “Can personality predict longitudinal study attrition? Evidence from a population-based sample of older adults”, Mendeley Data, V1, doi: 10.17632/g3jx8zt2t9.1

**Results:** Predictions obtained a negative likelihood ratio of 0.333 and a negative predictive value of 0.933. The results were indicative of fair performance.

**Conclusions:** AI might be useful to predict study retention. Furthermore, the results of this study might indicate a moderate effect of the Big Five on the probability of study retention. Finally, the AI used in this study is freely available, allowing anyone to experiment.

**Disclosure:** No significant relationships.

**Keywords:** traits; retention; Artificial Intelligence; Personality

## O204

### Dark triad personality traits prediction with AI

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**Introduction:** The dark triad is composed by the personality traits Machiavellianism, narcissism and psychopathy (MNP). Their complexity can make them difficult to interrelate. Artificial intelligence (AI) could help in this endeavour.

**Objectives:** To investigate whether AI could predict MNP from themselves.

**Methods:** Data from 210 questionnaires were analysed using an AI. The short Dark Triad questionnaire (SD3) was used to assess MNP. Two of the MNP scores were employed to predict the third one and the procedure was repeated for all of them alternatively. The AI was conservatively tuned to maximize the one-way random intraclass