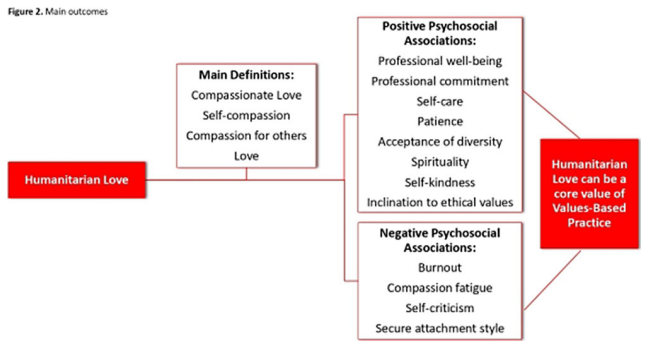
Image 2:



Conclusions: This review highlights humanitarian love's potential to enhance the psychosocial well-being of healthcare professionals and emphasizes its significance as a core value in values-based practice. Cultivating humanitarian love among healthcare professionals through research and interventions could bolster their resilience, job satisfaction, and overall fulfillment in their roles.

Disclosure of Interest: None Declared

Precision Psychiatry

EPP0424

Treatment adherence across different psychiatric disorders: findings from a large patient cohort

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Introduction: Medication adherence was defined by the WHO as "the extent to which a person's behavior coincides with the medical advice given" (WHO, 2003). Existing literature indicates that approximately 49% of patients with major psychiatric disorders do not fully adhere to their prescribed psychopharmacological therapy (Colom et al, 2002). Non-adherence can lead to partial therapeutic responses or treatment resistance, increased risk of relapse, re-hospitalization, elevated suicide risk, and overall poorer functioning, thereby compromising the patient-doctor therapeutic relationship (Garcìa et al, 2016).
Objectives: The aim of the present study was to assess potential differences in terms of clinical features related to adherence to treatment in a large cohort of psychiatric patients of an Italian psychiatric department.
Methods: The study included 307 psychiatric patients, of any gender or age, diagnosed with unipolar depression (UD), bipolar depression (BD), anxiety disorders (AD), schizophrenic spectrum disorders (SS) or a primary diagnosis of personality disorders (PD), based on DSM-5 criteria. Patients were consecutively recruited from the Department of Psychiatry at Luigi Sacco University Hospital, in Milan. The patient's adherence to treatment was evaluated using the Clinician Rating Scale (CRS), with a cut-off of ≥ 5 defining adherence subgroups (A+: score ≥ 5; A-: score < 5). Comparative and predictive analysis were performed for the whole sample and the two adherence subgroups.
Results: Overall, nearly one-third of the whole sample reported suboptimal medication adherence. Specifically, rates were approximately 35.3% and 32.7% for BD and SS, respectively, followed by 30.8% for PD, 28% for AD and, 20.3% for UD (see Figure 1). Patients with A- showed significantly higher current substance abuse (17.8% vs 4.5%, p<.001), along with a higher rate of lifetime substance abuse, although with a trend towards significance (31.5% vs 20.5%; p=.057). Moreover, the A- group had a significantly higher number of lifetime hospitalizations (1.35 ± 1.8 vs 0.73 ± 1.11; p<.001) and higher rate of previous psychotropic treatment dropouts compared to the A+ group (90% vs. 36.2%; p<.001, see Figure 2).
Image:

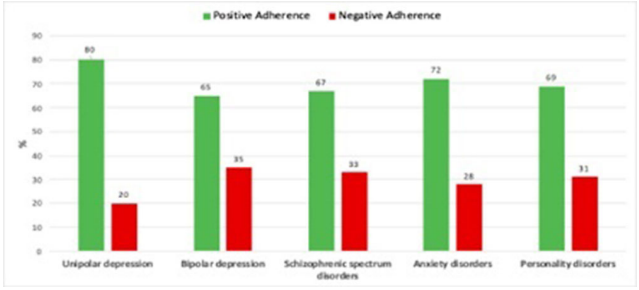

Image 2:

Conclusions: Approximately one-third of the whole sample reported a suboptimal medication adherence, with varying rates across different diagnoses. Current and lifetime substance abuse appears to be an unfavorable transdiagnostic factor. Additionally, severe outcomes such as increased hospitalizations and a more

acute disease presentation are linked to poorer adherence. Recognizing the characteristics of adherence patterns within specific diagnostic categories is crucial for designing precise interventions to enhance patient outcomes and optimize the overall effectiveness of treatment.

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EPP0425

Linking Digital Traits from Facial Expression, Voice, and Head Motion to Montgomery–Åsberg Depression Rating Scale Subscales

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Introduction: The 10-item Montgomery–Åsberg Depression *Rating* Scale (*MADRS*) measures different dimensions of depression symptomatology. Digital traits may generate deeper understanding of the MADRS subscales and provide insights about depression symptomatology.

Objectives: To identify digital traits that predict specific MADRS subscales and ascertain which digital traits are important for which MADRS subscales.

Methods: During a Phase II decentralised clinical trial in major depressive disorder (MDD), patients completed the MADRS and used AiCure (LLC, New York, NY, USA), a smartphone application, to complete image description tasks at baseline. Digital measurements identified from the literature as relevant to MDD symptomatology were conducted using audio and video data derived from the image description tasks. Digital measurements included speech (rate, sentiment and first-person singular pronouns), vocal acoustics (intensity, pause fraction and fundamental frequency), facial expressivity (regional facial movement) and head pose (Euclidean and angular head movement). Digital traits analysis involved data pre-processing followed by machine learning (ML) using Elastic Net, Decision Tree, and Random Forest models; model performance was evaluated using 5-fold cross-validation and mean absolute error (MAE). Important digital traits were calculated by percentage change in MAE after permuting a specific variable. Important digital traits for the MADRS Apparent Sadness subscale score were mapped to defined, interpretable domains.

Results: The ML model predictions varied for different MADRS subscales (**Table**). Overall, Elastic Net and Random Forest models outperformed Decision Tree across all subscales scores other than suicidal thoughts. Half of the literature-based digital traits contributed to the prediction of ≥1 MADRS sadness sub-scale score. The important digital traits for the Apparent Sadness subscale score could be mapped to 4 domains (**Figure**); this aligned with findings from the literature.

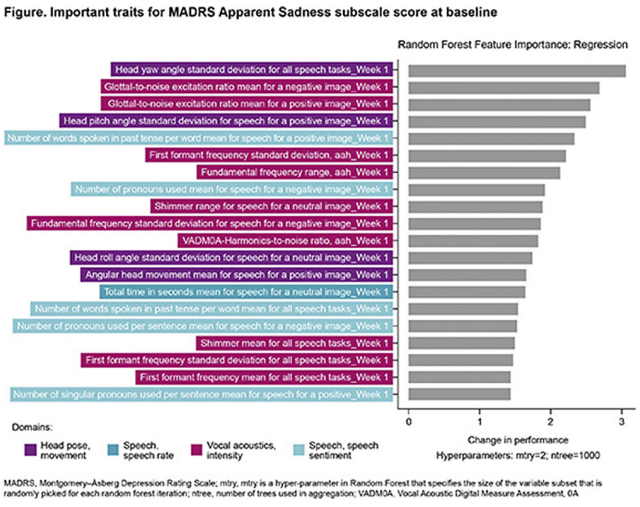
Image:

Table. Machine learning model performance on MADRS Total Score and subscale scores, MAE (standard error)

MADRS Scales (baseline)	Elastic Net	Decision Tree	Random Forest
Apparent Sadness	0.80 (0.10)	1.07 (0.20)	0.83 (0.10)
Concentration Difficulties	0.80 (0.26)	1.01 (0.13)	0.84 (0.10)
Inability to Feel	0.79 (0.15)	1.04 (0.22)	0.81 (0.18)
Inner Tension	0.82 (0.33)	1.05 (0.31)	0.82 (0.33)
Lassitude	0.78 (0.20)	0.92 (0.30)	0.77 (0.15)
Pessimistic Thoughts	0.87 (0.16)	1.03 (0.21)	0.85 (0.22)
Reduced Appetite	0.85 (0.32)	0.75 (0.08)	0.75 (0.26)
Reduced Sleep	0.82 (0.11)	0.81 (0.24)	0.81 (0.13)
Reported Sadness	0.61 (0.24)	0.72 (0.25)	0.60 (0.27)
Suicidal Thoughts	0.97 (0.13)	0.88 (0.22)	0.98 (0.08)
MADRS Total	0.83 (0.14)	0.96 (0.20)	0.85 (0.17)

Green text indicates best performance (MAE [SE]) across the three machine learning methods for each subscale; highlighted text indicates subscales with top three lowest total MAE (SE).
MADRS, Montgomery–Asberg Depression Rating Scale; MAE, mean absolute error; SE, standard error

Image 2:



Conclusions: Digital traits collected from patients with MDD were able to predict certain MADRS subscales better than others.

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