DSM Diagnosis Is Dead: Novel, AI-Powered Biopsychosocial Fingerprinting for Depressive, Anxiety, Trauma, and Stress Disorders

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For seven decades, the Diagnostic and Statistical Manual of Mental Disorders (DSM) has been psychiatrists' diagnostic textbook-of-choice, but do its pages belong in 2023? The DSM's problems fire up right as a patient walks into the clinic to talk through their symptoms—symptoms so amorphous that the odds of two clinicians picking out the same symptoms from the same patient are a little above zero. Then come the DSM's famous labels, which look exclusively at patients' surface symptoms, not their underlying internal issues. Under the DSM, very similar patients are slapped with different diagnoses just because their symptoms look different, and very different patients get the same label just because they look the same. These arbitrary symptoms and labels make picking out a patient's treatment like a game of chance, with millions of patients at the losing end. This study proposed and tested a first–of–its–kind alternative approach to mental health: using a patient's objective biological, psychological, and social features—not subjective symptoms and the DSM—to predict their optimal treatment. 420 patients were administered brain magnetic resonance imaging, seven psychological assessments, and three social inventories to generate them each 128 variables: a unique biopsychosocial "fingerprint." Six AIs discovered correlations between a patient's fingerprint and their final, successful treatment after trial and error. When implemented into the novel PsydKick application, the top-performing AI assigned optimal treatment with 91% accuracy, outperforming the DSM by 54% (p<.001). By landing on optimal treatment in seconds, PsydKick can skirt the ?deaths, delays, and debts the DSM has left in its wake for nearly a century. Step aside, DSM; PsydKick is the future.

Awards Won:
Air Force Research Laboratory on behalf of the United States Air Force: Glass trophy and USAF medal for each recipient
Air Force Research Laboratory on behalf of the United States Air Force: First Award of $750 in each Regeneron ISEF Category, FOR 2023 ONLY: EBED WILL HAVE TWO
Central Intelligence Agency: First Award: $1000 award
National Security Agency Research Directorate : First Place Award "Principles of Security and Privacy"