

TITLE

PROMES-U: Promoting mental health among university students: E-health technologies for personalized prediction and prevention of adverse mental health

Funding source: Fondo de Investigación Sanitaria, ISCIII-FEDER (PI20/00006)

PI: Jordi Alonso

Duration: 2021-2023

SUMMARY OF PROJECT

BACKGROUND: Adverse Mental Health (AMH; i.e., symptoms of depression, anxiety, harmful alcohol use, or suicidal ideation) among university students is a frequent yet preventable public health burden.

OBJECTIVES: **(1)** to enable personalized risk prediction of student AMH through a focus on short-term dynamic AMH phenotypes and related risk/protective factors; and **(2)** to test the effectiveness of online interventions in promoting mental health (awareness), increasing mental health literacy, eliminating barriers for seeking treatment, reducing stigma, and preventing mental disorders.

METHODS: a multi-centric (5 Spanish universities) study of all-grade university students (eligible n~35,500) consisting of two components: **(1) observational:** a **prospective cohort study** including web-based surveys and Ambulatory Assessment (smartphone-based digital sensing, brief daily surveys, and experience sampling); and **(2) experimental:** **(2.1)** pre-post evaluation of a **Universal Promotion-through-Feedback Intervention** (universal intervention), consisting of a personalized feedback report including psychoeducation and recommendations based on each individual's cohort data; and **(2.2)** a Randomized Controlled Trial of an **E-health prevention intervention** (selected intervention) aimed at reducing symptoms of depression and anxiety. Statistical techniques include latent profile analysis, mixed modelling, and machine learning classification techniques. The project will be co-created with students and university authorities, and cost-effectiveness and process will be evaluated using mixed methods.

EXPECTED RESULTS: a range of newly identified short-term, dynamic AMH phenotypes and related risk/protective factors; accurate personalized prospective risk prediction models for AMH; scalable and evidence-based online interventions to promote mental health and reduce AMH; intervention response models to identify which student benefit most from online promotion and prevention interventions.