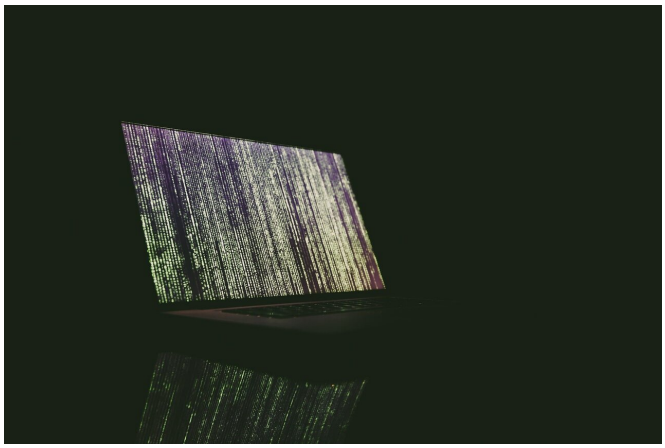
Scientists identify workflow algorithm to predict psychosis

11 January 2021



Credit: Pixabay/CC0 Public Domain

Scientists from the Max Planck Institute of Psychiatry, led by Nikolaos Koutsouleris, combined psychiatric assessments with machine-learning models that analyze clinical and biological data. Although psychiatrists make very accurate predictions about positive disease outcomes, they might underestimate the frequency of adverse cases that lead to relapses. The algorithmic pattern recognition helps physicians to better predict the course of disease.

The results of the study show that it is the combination of artificial and human intelligence that optimizes the prediction of mental illness. "This algorithm enables us to improve the prevention of psychosis, especially in young patients at high risk or with emerging depression, and to intervene in a more targeted and well-timed manner," explains Koutsouleris.

The algorithm does not replace treatment by medical professionals; rather, it assists decision making and provides recommendations as to whether to conduct further examinations on an individual basis. Using the algorithm, practitioners can identify at an early stage the patients that need therapeutic intervention and those who do not. "The results of our study could help drive a reciprocal and interactive process of clinical validation and improve prognostic tools in real-world screening services," Koutsouleris summarizes.

The study is published in *JAMA Psychiatry*.

More information: Nikolaos Koutsouleris et al, Multimodal Machine Learning Workflows for Prediction of Psychosis in Patients With Clinical High-Risk Syndromes and Recent-Onset Depression, *JAMA Psychiatry* (2020). DOI: 10.1001/jamapsychiatry.2020.3604

Provided by Max Planck Society

APA citation: Scientists identify workflow algorithm to predict psychosis (2021, January 11) retrieved 11 September 2022 from https://medicalxpress.com/news/2021-01-scientists-workflow-algorithm-psychosis.html

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.