

Can Wearables Predict Symptoms? Cross-Diagnostic Evidence in Psychiatry

Participants:

Elske Vrieze (Chair), Laura Van Heck (Presenter), Emily Presseller (Presenter), Emma De Schuyteneer (Presenter), Elfi Vergaelen (Presenter), Elske Vrieze (Moderator)

Symposium Synopsis:

For future digital interventions to intervene in the moment, they need to detect high-risk moments. The current standard, ecological momentary assessment (EMA), samples self-reported states via brief smartphone surveys several times a day. But sampling only a few times a day means the emotional states most proximal to symptom onset often fall between assessments, and repeated prompting can be burdensome. Wearable sensors offer a way to overcome these limitations: continuous, passive physiological monitoring that does not depend on participants noticing and reporting their own state. This raises the central question this symposium addresses: does physiological sensing add predictive value beyond EMA alone? This symposium examines this question across populations and outcomes. Laura Van Heck presents a transdiagnostic model classifying person-level clinical risk stage and momentary delayed affective recovery from stress. Emily Presseller compares EMA and wearable physiology for predicting binge eating in response to negative affect. Emma De Schuyteneer extends this approach to dietary restriction in anorexia nervosa. Elfi Vergaelen investigates momentary pain in individuals with chronic widespread pain. Together, these presentations assess whether wearable physiology's added value is consistent across disorders, its potential to illuminate maintenance mechanisms and its translational promise for JITAIs, relapse prevention, and personalised care.