THE UNIVERSITY of EDINBURGH
Institute for Neuroscience and Cardiovascular Research

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HUB FOR METABOLIC PSYCHIATRY

Metabolic biomarkers of clinical outcomes in severe mental illness: the METPSY study

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Background

- People with severe mental illness have high rates of obesity, type 2 diabetes, and cardiovascular disease
- Metabolic and mental health issues may extend beyond mere **co-occurrence** to **mutual influence**
- Metabolic therapies such as **metformin** or the **ketogenic diet** may improve mental health outcomes
- More research is needed to identify reliable **metabolic markers** which may impact mental health outcomes, and to determine the mechanisms behind their impact

Primary objective

- Determine whether changes in metabolic biomarkers in young adults with severe mental illness are associated with clinical outcomes over 12 months

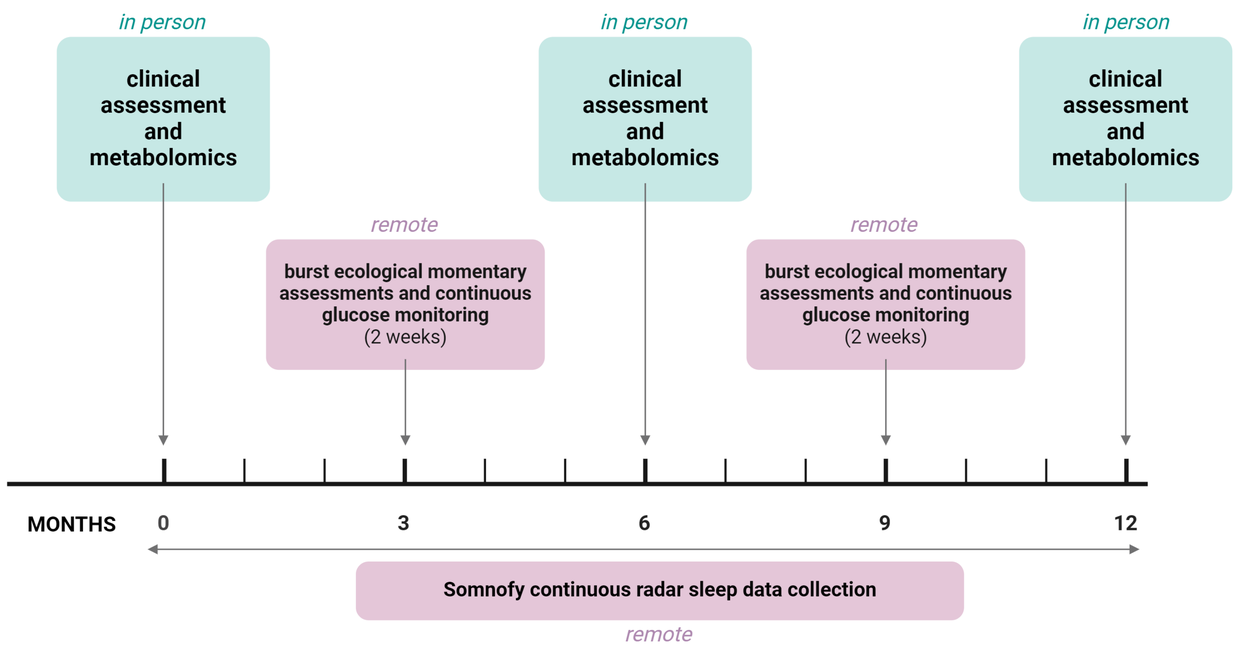
Secondary objective

- Investigate sleep and circadian rhythms at high resolution to assess how circadian disruption influences observed associations between metabolism and clinical outcomes

Methods

The study is open to patients (aged 16-35) living anywhere in Scotland with a diagnosis of major depression, bipolar disorder, or schizophrenia.

Participants are enrolled for 12 months, during which they complete in-person and remote assessments to track metabolic and mental health over time.



Remote assessment include **ecological momentary assessment**, **continuous glucose monitoring**, and **contactless sleep monitoring** to capture mental health symptoms, metabolic changes, and sleep disruptions in daily life.


Continuous glucose monitor


EMA app


Somnofy sleep monitor

Progress to Date

- Study launched in May 2025
- Total 31 participants enrolled so far
- Of these, 20 participants have completed first set of remote assessments
- 11 participants have completed their 6-month in-person visit

For more information or to express interest, contact us at: **METPSY@ED.AC.UK** or **07353104179**

METPSY v3.0 dated 10 JUN 2025 IRAS ID: 348873

Significance

The METPSY study is **first of its kind** in the UK and aims to investigate the links between metabolic and mental health using an innovative **deep-phenotyping approach**. Principles of open science and lived experience engagement, have been carefully embedded in this study to **maximise the impact and value of this work to psychiatrists, researchers, and patient communities**.

- Data will be made publicly available after the end of the study through DATAMIND
- A Lived Experience Advisory Panel has been advising on all aspects of the study

Get Involved

SCAN ME

We are open to patient referrals from anywhere in Scotland, and will cover travel and accommodation for participants to attend the study visits in Edinburgh.