

**Name & email supervisor(s):**

Dr Charlotte Lee

**Length and dates of internship:**

Monday 3<sup>rd</sup> June 2024 – 23<sup>rd</sup> September 2024 (flexible dates)

**Host department:**

Department of Primary Care Health Sciences, University of Oxford

**How will the internship be conducted:**

- In person at the university
- Virtual/ from home
- Both are possible, depending on preference of student

**Title internship project:****Name**

**COSMIC (CO**gnitive behavioural therapy for people with **Severe M**ental illness and obesity targeting **Insomnia Care**)

**Background**

People with severe mental illness (SMI), which includes chronic diagnosis such as schizophrenia and bipolar disorder, face a 15-year shortened life expectancy than the general population, largely due to cardiovascular disease. This alarming statistic is potentially attributed to the detrimental impact of excess weight on cardiovascular health, leading to premature mortality. In recognition of this issue, the COSMIC study has been initiated with the primary goal of addressing the challenge of excess weight within the SMI population.

While our current arsenal of interventions in the United Kingdom encompasses diverse approaches, ranging from behavioural programmes to emerging pharmacological treatments such as Ozempic and Wegovy, the universal applicability of these options remains a concern. Not everyone with SMI may find these solutions suitable due to their diverse responses and unique challenges associated with the diagnosis. Factors such as medical history, nature of the illness, co-occurring medical conditions, treatment resistance and personal preference contribute to the need for personalised and flexible approaches. Recognising this, the exploration of alternative avenues, such as novel transdiagnostic targets like addressing sleep issues, becomes crucial for enhancing inclusivity and effectiveness.

This innovative approach holds significant promise, as it extends beyond merely tackling sleep problems. By intervening on sleep, evidence suggests there is the potential for multifaceted benefits, including improvements in weight reduction and psychiatric symptoms. This not only broadens the scope of the intervention, but also underscores the interconnectedness of various

aspects of health. The prospect of simultaneously improving sleep, weight management and psychiatric well-being represents a novel avenue that could ultimately yield transformative outcomes for the left-behind group.

### **Project**

The COSMIC study, jointly backed [the BRC Preventing Multimorbidity Theme](#) and [BRC Better Sleep](#), makes use of a proven digital sleep-improvement programme (called Sleepio®). It is based on cognitive behavioural therapy for insomnia (CBT-I) and is recommended as the first-line treatment for insomnia by the National Institute for Health and Care Excellence (NICE).

In this study, we co-adapt the program with additional wrap-around support – as recommended by people with SMI via strong patient and public involvement – to specifically address their needs. Based on our previous work in this area, we anticipate the wrap-around support to include a buddy system or social prescribing link workers. This adaptation aims to target the unique challenges faced by those with SMI (e.g., isolation, loneliness, fear of others), advancing our understanding and treatment of multimorbidity in this population.

### **Summary of the internship project: (max 250 words, can include hyperlinks to further information)**

This is an exciting opportunity to join the COSMIC study team. It offers the student a chance to contribute according to their interests and skills, with two distinct options to choose from.

#### **Option 1: Systematic Review**

Conduct a systematic review of randomised controlled trials (RCTs) evaluating the impact of cognitive-behavioural therapy for insomnia on sleep and weight improvement. This option involves a comprehensive analysis of existing literature, providing valuable chance to develop data synthesis and interpretation skills, critical appraisal and evidence-based decision making.

#### **Option 2: PPI and Uncontrolled Feasibility Study**

Co-develop an intervention with an existing panel of patient and public involvement (PPI) volunteers, leading an uncontrolled feasibility study with 20-30 participants to demonstrate proof-of-principle. Objectives include working with the PPI group, adapting Sleepio® to their specific needs, and assessing the feasibility and acceptability of the intervention quantitatively and qualitatively.

### **Supervision**

The student will be regularly supported through weekly meetings with the supervisor and fortnightly or monthly meetings with the broader project team, comprising researchers in sleep medicine, cognitive-behavioural therapy, nutrition, psychosis and clinicians. Collaboration with librarians at the University of Oxford Bodleian Health Care Libraries (Option 1) and the established PPI panel (Option 2) is encouraged.

### **Current Progress**

- Option 1: To be started.
- Option 2: Data sharing agreements with Sleepio® and the University of Oxford have been approved. The study undergoing ethical review, with the goal of obtaining approval from the MS IDREC by June 2024.

### Learning objectives:

#### Option 1: Systematic Review

##### Research Methodology

- Gain experience in systematic review methodology, including precise research question formulation, literature searches, and study selection.

##### Critical Appraisal Skills

- Hone skills to critically assess the quality and relevance of RCTs typically included in systematic reviews.

##### Synthesis and meta-analysis

- Develop proficiency in synthesizing and interpreting data from diverse studies, with an optional focus on meta-analysis principles.

##### Collaboration and teamwork

- Foster collaborative skills through close teamwork with statisticians and subject matter experts for a comprehensive systematic review.

##### Publication writing skills (optional)

- Enhance writing skills for clear and concise communication of systematic review methods and findings suitable for publication.

#### Option 2: PPI and Uncontrolled Feasibility Study

##### Patient-Centred Intervention Development

- Understand the value and gain experience in collaborating with PPI volunteers to co-develop interventions tailored to their needs.

##### Intervention Adaptation Skills

- Learn to adapt interventions to enhance engagement.

##### Feasibility Study Skills

- Develop skills in designing and executing an uncontrolled feasibility study, utilizing descriptive statistics to assess engagement and retention rates.

##### Ethical Review and Compliance

- Understand the meaning and adhere to research ethics and good clinical practice (GCP) standards during the trial, ensuring ethical conduct and participant safety.

##### Qualitative Research (optional)

- Learn to conduct semi-structured interviews to qualitatively assess intervention acceptability at the 6-week follow-up – funding to undertake the [Qualitative Research Methods course](#) might be available.

## **Personal Development Objectives**

### Effective Communication

- Enhance overall communication skills, both written and verbal, for conveying complex research concepts to diverse audiences.

### Time and Project Management

- Develop strong time and project management skills to efficiently meet deadlines, prioritize tasks, and ensure the smooth progress of the research.

### Adaptability and Flexibility

- Cultivate adaptability and flexibility to navigate evolving project requirements, methodologies, and unforeseen challenges.

### **Any further information:**

The supervisor (Charlotte Lee) works across two departments at the University of Oxford: The Nuffield Department of Primary Care Health Sciences (who are funding this study) and the Nuffield Department of Clinical Neurosciences (who are hosting this study).

We see this as an excellent opportunity for the student to learn the value of working across disciplines. If successful, they will be supported by both departments.