MRC-NIHR Trials Methodology Research Partnership PhD project

The Department of Biostatistics and Health Informatics at the Institute of Psychiatry, Psychology and Neuroscience, King's College London is offering a fully funded PhD in conjunction with the MRC-NIHR Trials Methodology Research Partnership.

Projects available:

Students can apply for one of the following three projects, or suggest their own research proposal in the area of trials methodology research.

1. **A unified approach for the statistical analysis of post-randomisation variables in clinical trials**

This project will review the analysis approaches for post-randomisation variables, including non-compliance, mediation analysis, surrogate outcomes, missing data and clustering effects. Currently all these issues are considered separately. This project seeks to unify the theory and analysis to provide a comprehensive approach for the statistical analysis of post-randomisation variables in clinical trials. The project will apply this approach to recently completed trials of psychological treatments in psychosis.

Supervisors:
Professor Richard Emsley, Professor of Medical Statistics and Trials Methodology
Professor Sabine Landau, Professor of Biostatistics

2. **Transdiagnostic mechanisms in cognitive behavioural interventions for patients with Persistent Physical Symptoms: How do transdiagnostic psychological therapies work?**

Persistent Physical Symptoms (PPS) such as chronic fatigue or pain are associated with increased disability and health care costs. Cognitive behavioural interventions can reduce levels of symptoms and improve functioning in a range of PPS. While it is standard clinical practice to adapt psychological therapies it is not clear which components of the interventions are transdiagnostic, that is, address cognitive or behavioural responses shared by patients across the PPS spectrum, and which are disorder specific. This interdisciplinary project will develop and apply new statistical methods to model the similarities and differences in treatment mechanisms across PPS populations, in order to help clinicians identify core mechanisms and develop new psychological interventions.

Supervisors:
Professor Sabine Landau, Professor of Biostatistics
Professor Trudie Chalder, Professor of Cognitive Behavioural Psychotherapy

3. **Precision medicine and mechanism: How and for whom do psychological treatments work?**

Mediation and moderation analyses are necessary for targeting treatments to those who will best benefit, but these processes are often studied in isolation and cross-sectionally. This project would exploit datasets ideally designed for development of longitudinal explanatory precision medicine models incorporating mediation and moderation/latent variable moderators. This cross-disciplinary project (psychology, statistics, medicine) will contribute to methodological and clinical understanding of precision medicine and mechanisms relating to transdiagnostic cognitive behavioural treatments in chronic fatigue syndrome and irritable bowel syndrome.

Supervisors:
Dr Kimberley Goldsmith, Reader in Medical Statistics
Professor Rona Moss-Morris, Chair in Psychology as Applied to Medicine

Training opportunities:

The student will have the opportunity to gain training through courses on the [PGCert in Applied Statistical Modelling and Health Informatics](#) at the Institute of Psychiatry, Psychology and Neuroscience, and courses at other institutions in the MRC-NIHR Trials Methodology Research Partnership (TMRP). The student will be part of the wider cohort of TMRP PhD students and to attend meetings organized for cohort.

Requirements

A strong academic track record with a 2:1 or higher in a relevant undergraduate degree with substantial statistical content, or its equivalent if outside the UK. It is also desirable to have a strong performance in a relevant postgraduate degree (e.g. medical statistics, clinical trials, epidemiology).

The successful candidate will work in a highly interdisciplinary environment and should be able to work independently and in collaboration with members of the MRC-NIHR Trials Methodology Research Partnership.

Application procedure

Please provide an academic CV, a personal statement detailing your research interests and reasons for applying to the PhD project, and contact details for 2 academic referees. All documents should be in electronic format and sent via e-mail to: Richard.emsley@kcl.ac.uk

The closing date for applications is **Friday 15th November 2019**.

Interviews will be held in **late-November** (exact date TBC).

Following interview, the selected candidate will need to apply and be accepted for a place on the Institute of Psychiatry, Psychology and Neuroscience PhD programme.

Details about the PhD programme and the application process can be found here: https://www.kcl.ac.uk/ioppn/study/prospective-students/programmes-of-study/pgr/applicationprocess/howtoapply

The start date for the project is **1st July 2020** or **1st October 2020**, and is offered full time for 3 years.

For further information, please contact Professor Richard Emsley: richard.emsley@kcl.ac.uk

Funding provided

- Stipend at UKRI rate (£15,009 p.a. in 19/20) for 3 years
- Tuition Fees at UK/EU rates (£5,700 p.a. in 19/20) for 3 years
- Conference travel of up to £500p.a. for 3 years
- Note that this studentship covers UK/EU tuition fees only