



MSc/PhD- Projects at Keele

Project-1

Evaluating the contributing factors in psychological disorders (e.g. depression, schizophrenia, bipolar disorders, etc)

Dataset: UK, EU, or US Biobank

The dataset that provides an up-to-date information about the prevalence of psychiatric disease among people in Great Britain, EU or US will be used.

Your research project:

For MSc students: You will focus on one (max two) contributing and/or confounding factors and will analyse this dataset.

For PhD students: You will focus on more than a few contributing and/or confounding factors, will analyse this dataset, and develop your research with your supervisor to gradually become independent – this is to prepare you for an academic position (teaching or research e.g. postdoc, research fellow...).

Methodology:

After a period of **literature review**, the researcher (MSc/PhD student candidate) will extract the **variables** from the selected dataset e.g. body mass index (BMI), the presence of specific mental disorder, age, gender, educational qualifications, socioeconomic status, comorbidities, family history, occupation, income, etc (this list is not exhaustive).

Based on the **type** of variables, the relationship between **independent variable(s)** and **dependent variable** e.g. schizophrenia (or other mental/psychiatric disorders) will be investigated using an **appropriate statistical tests** e.g. logistic regression analysis, cubic splines, nested ANOVA, ANCOVA, etc. All statistical tests will be performed in SPSS or Prism, but you will be given an opportunity to learn R should you wish to.

Scientific output:

Your research output will be presented internally (seminars/ internal conferences), and in a dissertation format i.e. final MSc/PhD report or thesis as applicable. If the MSc/PhD student candidate is extremely successful, their findings will be presented in national / international conferences or can be published in a peer-reviewed journal.

It is expected from PhD candidates to have two or three publications by the time they graduate. This should have positive impact on their employability.

Examples of research outputs:

-
1. **Body mass index and common mental disorders: exploring the shape of the association and its moderation by age, gender and education.** DOI: [10.1038/ijo.2011.65](https://doi.org/10.1038/ijo.2011.65)
 2. **The combined association of depressive symptoms and C-reactive protein for incident disease risk up to 12 years later.** DOI: [10.1016/j.jbbs.2020.01.010](https://doi.org/10.1016/j.jbbs.2020.01.010)
-

Employability:

This type of research would benefit those who would enjoy working in clinical neuro/psychiatric discipline, as a population health researcher, or a big-data analyser. Additional training opportunities could be provided to PhD candidates to enhance their employability (TBD). As duration of MSc courses are rather short, students are encouraged to engage with their supervisor(s) sooner rather than later to be more productive in their research activities in terms of output(s).