Project Details	
Project Code	MRCPHS26Br Joinson
Title	Mental health and wellbeing at the menopause transition
Research Theme	PHS
Project Type	Dry lab
Summary	The menopause transition is a period of increased risk of mental health problems, but there is poor understanding of the reasons for this link. The aim of this PhD project is to examine factors that could be associated with better or worse mental health at the menopause transition. The project will apply cutting-edge causal inference methods to existing data from a longitudinal population-based cohort to advance understanding of the biopsychosocial mechanisms that drive the increases in mental health problems, and protective factors that might mitigate against poor mental health, at the menopause transition.
Description	**Background:** Despite the increasing media coverage about menopause, there is poor understanding of why this transition is associated with an increased risk of mental health problems. Increases in depression and anxiety during menopause are often attributed to hormonal changes, but other biopsychosocial factors experienced by women during the menopause transition could be contributing to poor mental health and wellbeing. There is also evidence that women who experience an earlier menopause than their peers are at greater risk of poor mental health. The aim of this PhD project is to identify factors, such as biological, psychological, and social influences, that affect mental health and well-being during the menopausal transition. The project will apply cutting-edge causal inference methods to existing data from a longitudinal population-based cohort to advance understanding of the biopsychosocial mechanisms that drive the increases in mental health problems at the menopause transition, as well as protective factors that might mitigate against poor mental health. **Key research questions:** What biopsychosocial factors affect mental health during the menopause transition? Why do women who experience an earlier menopause have a greater risk of mental health problems? Specific objectives (i) To review the literature on biopsychosocial factors that influence mental health through the menopause transition (during perimenopause and after the menopause). (ii) To use causal mediation methods to understand causal pathways to better or worse mental health outcomes during the menopause transition. (iii) To understand why women with an earlier menopause are at greater risk of poor mental health. The student will take ownership of the project through the selection of biopsychosocial factors on which they will focus their project. Possible factors include socioeconomic factors, lifestyle factors (e.g. physical activity levels, diet, alcohol use and smoking); physical health; lower urinary tract symptoms; changes in weight; vasomotor symptoms; sleep

problems; social, emotional and practical support; relationship quality, and sexual wellbeing).

The quantitative analysis in this PhD project will be based on existing data from the ALSPAC Mothers' Cohort (https://www.bristol.ac.uk/media-library/sites/alspac/documents/researchers/cohort-profile/appendix1b-cohort-profile-mothers.pdf). The ALSPAC Mothers Cohort provides longitudinal data on patterns of menstrual bleeding. This is a major strength compared with previous studies that relied on retrospective recall of age at menopause (which is susceptible to recall error). The longitudinal nature of the ALSPAC data will also enable the classification of woman into menopausal stages based on the STRAW criteria. ALSPAC also provides repeated assessments of mental health using validated questionnaires (including depression, anxiety and wellbeing), and a wealth of data on biopsychosocial factors. Statistical analysis will include multivariable regression and training will also be provided in advanced statistical methods including multiple imputation and causal mediation approaches.

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