**Funding Source: Wellcome Trust grant**

**Proposed start date:** 1 October 2024

**Eligibility:** UK applicants only

**Department/School:** Health Sciences

**Supervisors:** Dr. Emma O’Donnell ([e.odonnell@lboro.ac.uk](mailto:e.odonnell@lboro.ac.uk)), Prof. Rebecca Hardy ([r.j.hardy@lboro.ac.uk](mailto:r.j.hardy@lboro.ac.uk)), Prof. Eef Hogervorst (e.hogervorst@lboro.ac.uk)

**Project Title:** Ethnic inequalities in mental and physical multimorbidity in women before, during and after the menopause transition: modulatory effects of physical activity

**Project Description:**

Menopause, both natural and surgical, are associated with increased risk of developing chronic diseases, such as cardiovascular disease and osteoporosis. This increased risk is associated in part with the menopause-associated loss of estrogen. Endogenous estrogen confers multiple beneficial effects on numerous systems, including the cardiovascular, immune, metabolic, and skeletal systems, and the brain. Accordingly, loss of estrogen due to menopause is associated with evolution of a proatherogenic lipid profile, insulin resistance, obesity, osteoporosis, hypertension, and increased prevalence of anxiety and depression. These conditions may present individually, but with increasing age, they more commonly cluster. The health consequence of clustering, or multimorbidity (MM), are not clear. However, MM is an important predictor of poor health outcomes and is associated with decreased life expectancy. Other factors that are thought to play a role on developing MM in women include ethnicity. However, the impact of ethnicity on MM in women across the menopause transition are not well described. In our study we will examine ethnic inequalities in mental and physical MM in women before, during and after the menopause transition, and we will investigate the modulatory effects of physical activity levels on MM. We aim to identify high-risk groups who may benefit from lifestyle interventions to help improve MM outcomes. This project will be based at Loughborough University.

**References:**

Chudasama YV, Khunti K, Davies MJ. Future Healthc J. 2021 Jul;8(2):e224-e229; Eigendorf J, et al. Eur J Prev Cardiol 2019;26:1903–1906; Klein SL, Flanagan KL. Nat Rev Immunol 2016;16:626–638; Maas AHEM et al., Eur Heart J. 2021 Mar 7;42(10):967-984; Miller VM, Duckles SP. Pharmacol Rev 2008;60:210–241; Morabia A, Costanza MC. Am J Epidemiol 1998;148:1195–1205; Puri P et al., BMC Womens Health. 2022 Apr 12;22(1):117; Rocca W.A., et al., Gerontol. A Biol. Sci. Med. Sci. 2017;72:1213–1217; Sehl ME et al., JNCI Cancer Spectr. 2018 Sep 10;2(3); Xu et al., Human Reprod, Volume 35, Issue 1, January 2020, Pages 203–211.

**Funding details:**

*Students on this programme will be supported by a generous funding package. This will include:*

* *Postgraduate research fee waiver at standard College of Life Sciences UK rates for three years of the PhD*
* *Wellcome Trust stipend covering your salary for all three years of the PhD*
* *Research grant for training, research and travel costs*

**Entry requirements:**

Applicants are required to hold/or expect to obtain a UK Bachelor Degree 2:1 or better in a relevant subject. UK Bachelor Degree 2:2 may be considered, subject to approval from the Dean of the Doctoral College.

The University of Leicester [English language](https://le.ac.uk/study/research-degrees/entry-reqs/eng-lang-reqs) requirements apply where applicable.

This programme is open to:

* allied health professionals
* nurses
* midwives
* junior doctors
* general practitioners

Fellows recruited to the programme must be practicing healthcare professionals and be registered with a national professional regulatory body (e.g. the General Medical Council, Health and Care Professions Council) in the UK/Republic of Ireland.

Medical graduates must be registered on a UK/Republic of Ireland specialist training programme or must be a registered GP.

All fellows must have completed their undergraduate degree and be registered with the relevant professional body.

**Application advice:**

For full application advice, please go to: <https://le.ac.uk/study/research-degrees/healthcare-inequalities/application-help>.

To apply, please go to: <https://le.ac.uk/study/research-degrees/funded-opportunities/leicestershire-healthcare-inequalities-improvement-dtp>

With your application, please include:

* Full up to date CV
* Personal statement of 700 words (excluding references). For detailed instructions on what we will be looking for in your personal statement and your CV, please review the guidance here: <https://le.ac.uk/study/research-degrees/healthcare-inequalities/application-help>. **Please do not exceed the word limit, as your application may be delayed.**
* Degree Certificates and Transcripts of study already completed and if possible transcript to date of study currently being undertaken
* Evidence of English language proficiency if applicable
* In the reference section please enter the contact details of your two academic referees in the boxes provided or upload letters of reference if already available.
* A filled out Widening Participation Questionnaire

In the funding section please specify that you wish to be considered for **Wellcome Trust LHII DTP**

In the proposal section please provide the name of at least one or at most two of the projects you are interested in (please indicate title and name of supervisor). The first project you list will be taken to be your preferred choice.

Upload the Widening Participation form (found on the above link) to the proposal section

**Project / Funding Enquiries to:** [**lhiip@leicester.ac.uk**](mailto:lhiip@leicester.ac.uk)

**Application enquiries to** [**pgradmissions@le.ac.uk**](mailto:pgradmissions@le.ac.uk)

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