**Funding Source: Wellcome Trust grant**

**Proposed start date:** 1 October 2024

**Eligibility:** UK applicants only

**Department/School:** Health Sciences

**Supervisors:** Dr. Nicola Paine (N.J.Paine@lboro.ac.uk), Prof. Lettie Bishop (N.C.Bishop@lboro.ac.uk),

**Project Title:** Health inequalities in multimorbidity; the roles of stress, physical activity and sedentary behaviour on markers of disease risk.

**Project Description:**

Stress, physical (in)activity, and sedentary time are risk factors for non-communicable chronic diseases (NCDs). The presence of multimorbidities (e.g., obesity, hypertension, chronic systemic inflammation) are linked to these risk factors and contribute to NCD risk. Health inequalities accelerates multimorbidity development and may explain why NCDs (such as cardiovascular disease) occur at an earlier age in populations who experience health inequalities such as South Asians. This PhD will investigate interactions between stress, physical activity, and sedentary time on physiological risk markers of CVD in South Asian populations. These risk factors will also be assessed in the context of other multimorbidities that increase CVD risk (e.g., obesity, hypertension). No studies in South Asian populations have examined the impact of acute psychological stress on cardiovascular and inflammatory mechanisms; this project will be the first to do so, providing vital data on mechanisms which could explain increased CVD risk in South Asian populations. The project will yield skills and knowledge in experimental and behavioural medicine, under world-leading mentorship and training from the supervisory team. The project will be based in the renowned National Centre for Sport and Exercise Medicine (Loughborough University). The successful candidate will receive training in all assessments and techniques required for the PhD.

**References:**

1. Sattar et al., 2015, Lancet Diabetes Endocrinol, 3, 1004-16;
2. Volgman et al., 2018, Circulation, 138 e1-e34;
3. Rana et al., 2014, CMAJ open, 2, E183-E91;
4. Misra et al., 2013, Nutrients, 5, 2708-33;
5. Pimple et al., 2019, J Am Heart Assoc, 8, e011866;
6. Vyas et al., 2021, Heart, 107, 996-1002;
7. Chauntry et al., 2022, Psychoneuroendocrinology, 141, 105756;
8. Ekelund et al., 2019, BMJ, 366, l4570;
9. Yates et al., 2015, BMJ open, 5, e006181-e;
10. Tillin et al., 2013, Diabetes Care, 36, 383-93
11. Vos et al., 2020, The Lancet, 396, 1204-22;
12. Kivimäki et al., 2018, Nat Rev Cardiol, 15, 215-29;
13. Gallacher et al., 2018, J Comorb, 8; 1-8;
14. Schiøtz et al., 2017, BMC Public Health, 17, 422;
15. Yusuf et al., 2020, Lancet, 395, 795-808;
16. Bull et al., 2020, Br J Sports Med, 54, 1451;
17. Chauntry et al., 2022, Psychoneuroendocrinology, 141, 105756

**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**

**Application enquiries to** **pgradmissions@le.ac.uk**