



Durability in Endurance Athletes

**Faculty of Wellbeing Education
and Language Studies (WELS)**

Call for doctoral projects starting in October 2026

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Project description

School

Education, Childhood, Youth and Sport

Unit

Institute of Educational Technology

Members

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Aim

The aims of this project are to:

1. Assess changes in endurance performance and its determinants due to accumulated fatigue/work (i.e. durability or physiological resilience)
2. Explore the mechanistic bases of these changes

3. Develop testing protocols that effectively assess durability in endurance sports, depending on the specific demands of such activities
4. Implement acute and training interventions to enhance durability

These aims will add to the fast-growing knowledge around durability, which is gaining interest in endurance sports (e.g., running, cycling, triathlon, rowing, etc). The PhD candidate will be able to discuss specific research aims and negotiate final project aims.

Methodology

The project will primarily use the newly developed sports science laboratory at The Open University campus. The facilities include a Cosmed metabolic cart, lactate analyser, Kistler and AMTI force plates, Qualisys motion capture, strength and conditioning equipment, and many other devices that could be used as part of the PhD research.

Methodologies could include observational, cross-sectional, longitudinal, or randomised control trial designs, where athletes' physiology and biomechanics will be assessed in fresh and acute fatigued conditions. Interventions to enhance durability may include chronic training interventions and nutritional or technological acute strategies.

Contribution

The project will add to the fast-growing knowledge around durability, which is getting recognised as a 4th factor determining endurance performance. The practical relevance of assessing performance and its determinants in a fatigued state has been recently highlighted in both laboratory and field-based studies in

a wide range of populations, from active adults to elite athletes. A better understanding of the mechanistic bases of durability, strategies to improve it, and appropriate testing protocols to measure it will lead to enhanced performance, better prediction modelling, and improved training prescription in populations ranging from recreational to elite endurance athletes.

PhD/EdD/DHSC project

This PhD will allow the candidate to negotiate a specific path of research within the areas outlined above. Projects aiming to link physiological bases with real-world performance will be especially welcomed.



