Understanding the mechanisms of nature-based programmes for mental health and wellbeing

Nature-based interventions (such as forest walking, green exercise, horticulture and care farming) can promote mental health and wellbeing. Theoretical accounts suggest various cognitive, psychological, biological and evolutionary explanations for these effects. However, there is insufficient rigorous empirical research testing the potential mechanisms, including mediators and moderators of effects. Understanding the mechanisms by which nature-based programmes improve mental health and wellbeing will help us to a) optimise interventions, by identifying or developing programmes that target the implicated mechanisms, and b) tailor interventions, by identifying what works for whom.

We are offering DPhil projects that sit within the Flourishing and Wellbeing Theme of the NIHR Oxford Health Biomedical Research Centre. This new theme aims to understand how nature-based programmes can promote both human and planetary flourishing, in the context of current mental health and climate change challenges. We refer to this as Ecological Collective Flourishing (E-Co-Flourishing), which incorporates wellbeing on multiple levels (physical, emotional, social) and with the natural world. Co-production and engagement with groups underrepresented in research is fundamental to our work. Our team is interdisciplinary, including mental health science, humanities, biology, ethics and philosophy.

We are offering DPhils (and Masters projects) in the following areas:

- Testing the role of psychological processes such as attentional/sensory focus, nature connectedness and stress reduction in mediating the effects of greenspace activities on mental health and pro-environmental behaviour. Studies will involve research with diverse groups in real-world settings, including green spaces around Oxford. Dr Lalitha Iyadurai lalitha.iyadurai@psych.ox.ac.uk

- Testing cognitive/computational mechanisms underlying how different levels of exposure to natural environments influence affective reinforcement learning, value-based decision-making and social-ecological prosocial decisions. The studies can also include agent-based modelling of how well-being evolves in time, and somatisation/bodily representation of emotions: Dr Erdem Pulcu erdem.pulcu@psych.ox.ac.uk