NIHR | Oxford Health Biomedical Research Centre

Flourishing & Wellbeing

Investigating how non-clinical environments might be utilised to enhance public health and mental health

Main Aim: To enable flourishing initiatives and interventions for patients and non-patients, delivered in spaces beyond the clinic.

How?

Ilina Singh

NIHR | Oxford Health Biomedical Research Centre

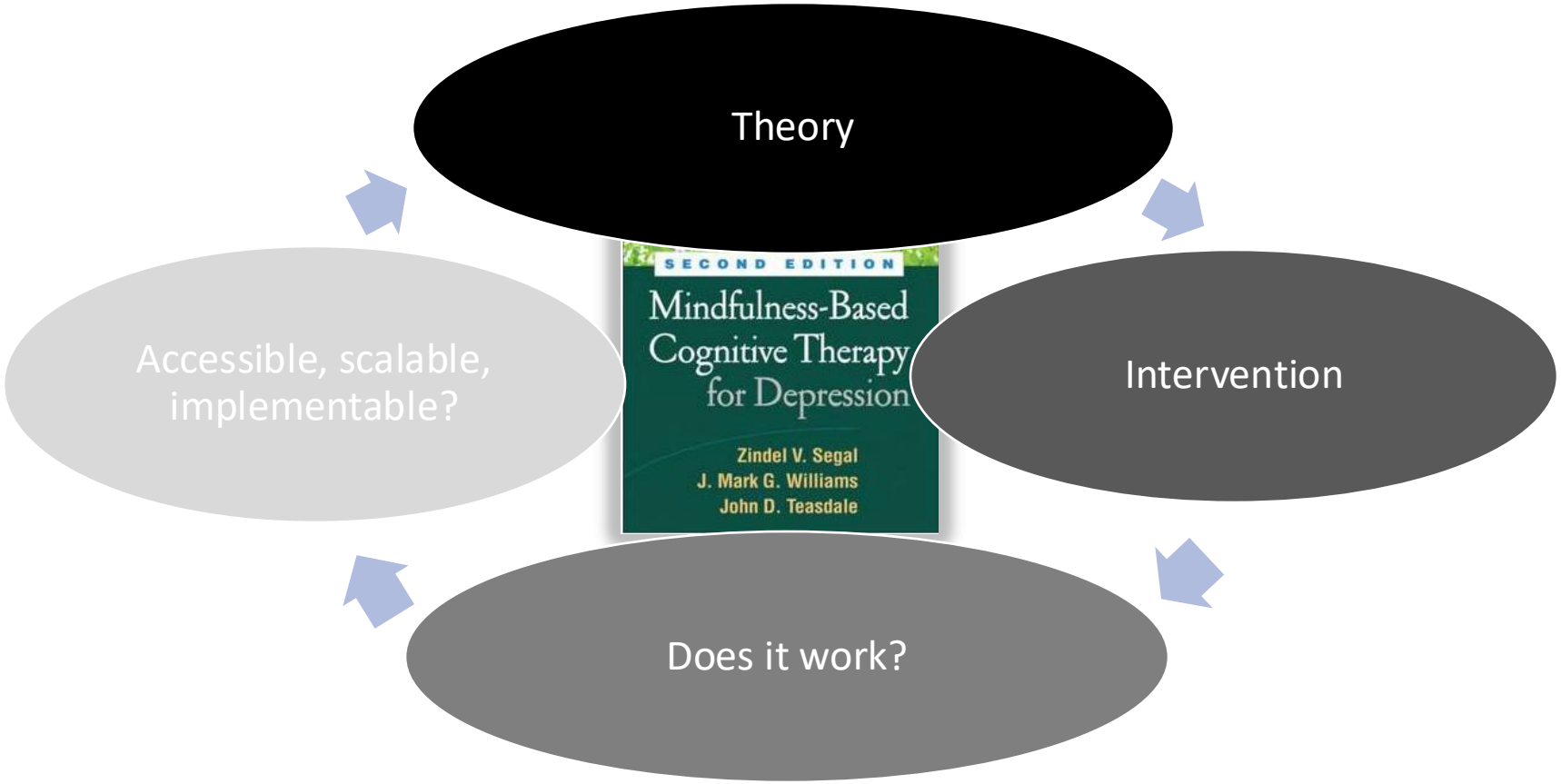
UNIVERSITY OF OXFORD

Ecological-Collective-Flourishing (E-Co-Flourishing):

"A **holistic state** of well-being, comprised of **psychological, physical, social, and moral elements,** in which a good life for human beings is entangled with, and **mutually constitutive** of, the well-being of fellow humans and the **health of the non-human world**"

Ilina Singh

Translational Science: A Success Story



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VIEWPOINT

Mindfulness-Based Cognitive Therapy's Untapped Potential

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Major depressive disorder (MDD) is the second leading cause of disability worldwide, shows a 20% lifetime prevalence, can lead to premature mortality, and produces decrements in health, quality of life, and well-being, while also placing an enormous personal and economic burden on individuals, families, and societies at large.[1] It often takes a relapsing and recurrent course; therefore, most of the prevalence, burden, and cost of depression is a consequence of relapse or recurrence. Extrapolating from epidemiologic data, we can expect as many as 1 billion people alive today will have a depressive episode at some point in their lifetime and as many as around half of these will go on to have further episodes. We have effective pharmacologic treatments for acute depression (eg, fluoxetine).[2] However, while antidepressants reduce relapse rates for 2 years, there is insufficient evidence regarding their long-term use, and rates of relapse or recurrence remain significant. Many patients experience contraindications and adverse effects, and often express preferences for psychological treatments that support long-term recovery.[3] Psychological treatments can be as effective as antidepressants, better tolerated, and associated with long-term gains at lower overall costs. Moreover, the effectiveness of combined pharmacotherapy and psychotherapy is the best practice for moderate depression.[4]

The epidemiology and life course of depression demand innovation to ensure we offer the right approach to the right person, at the right time, in the right way. Theoretically grounded research explaining the mechanisms through which psychological treatments, such as mindfulness-based cognitive therapy (MBCT), can prevent relapse or recurrence and aid recovery has generated an impressive body of research across the translational pathway. This work suggests ways we can realize the quadruple aim of improving depression outcomes, enhancing population health, providing patients with choices, and maximizing the effectiveness or cost-effectiveness of existing treatments.

MBCT as an Exemplar for Innovation

MBCT is a manualized group-based psychological program that combines mindfulness meditation practices with cognitive therapy techniques. It was designed to help individuals with recurrent depression by enhancing their awareness of and relationship to negative thoughts and feelings, thereby reducing the risk of relapse.[5] MBCT was developed from theory and empirical findings that demonstrate the role of cognitive reactivity and rumination in the course of depression and the potential of metacognitive awareness in recognizing, decentering, and disengaging from ruminative thought patterns to prevent depressive relapse or recurrence.[5] MBCT has demonstrated adaptability to different cultural contexts and effectiveness in countries across North America, Europe, Asia, and Australia, although so far most research has come from the Anglosphere.[3] The translational trajectory of MBCT spans feasibility studies and large-scale trials that have been replicated among various research groups, involving different comparators and subtypes of depression, as well as implementation studies and ongoing mechanisms research using multiple methods and study designs.[5-8]

It has been shown that MBCT, compared with maintenance antidepressant medication, can significantly reduce the risk of depressive relapse by 23% within a 1-year follow-up period.[6] A recent meta-analysis showed that the sequential delivery of preventive cognitive therapy or MBCT during or after medication tapering may effectively prevent relapse.[3] MBCT has been tested across subpopulations with depression and is considered suitable for patients with recurrent depression, irrespective of their illness stage (ie, in episode, partial remission, or full remission but vulnerable to relapse or recurrence). Ongoing work is now focused on further improving efficacy by identifying for whom MBCT works and why, and how to make it accessible to those who might benefit.

For Whom Might MBCT Be More Helpful?

MBCT might be especially helpful for individuals with entrenched depression (ie, people with a history of childhood difficulties and trauma, reporting 3 or more previous MDD episodes and more residual symptoms). This aligns with the theoretical framework of the MBCT proposed mechanisms that help break cognitive patterns that maintain and enhance depressive symptoms. Research has shown that MBCT outcomes are maximized when delivered to individuals with entrenched depression.[6]

How Does MBCT Work?

MBCT increases the capacity to adopt a decentered perspective on one's experiences, which in turn mediates its effect on improved depression outcomes. A recent neuroimaging analysis indicated that alterations in brain connectivity during a state of rumination can be modified by an increased ability to sustain attention on bodily sensations after receiving MBCT. This may reduce the likelihood of participants becoming stuck in ruminative processing.[7] Integrating the theory of what works for whom and how, it has been observed that patients with entrenched depression, compared with those with less entrenched depression, may benefit 3 times more from MBCT through the acquisition of mindfulness skills (eg, present-moment attention, and nonjudgmental acceptance), thus maximizing its effectiveness.[8]

How Can MBCT Be Accessible?

Despite the growing evidence base and recommendations for MBCT in many national depression guidelines, access to MBCT is still limited. There are accessibility challenges for psychological treatments, such as MBCT, including costs and a shortage of psychologists. Implementation science suggests that research evidence, clinical guidelines, champions, and training MBCT therapists are key facilitators to improving access.[9] Exploring different delivery modes (eg, online platforms, blended approaches combining face-to-face sessions with digital resources, or self-help books) and MBCT-adapted programs (eg, MBCT-for-Life, or MBCT-Taking-it-Further) could enhance accessibility and reach by providing patients with various choices at different levels of intensity, potentially maximizing cost-effectiveness. Although MBCT might be a promising approach for addressing depression among young people, where the prevalence of depression is high, it's still not clearly articulated how it should be delivered. Universal school programs do not seem to be the optimal choice.[10]

Implications for Future Research

Depression presents a significant challenge, for which tailored treatments developed through translational science could lead to incremental improvements in the 4-fold aims outlined above. Research is necessary to explore the existence of patient subgroups for whom these treatments may be more effective, less effective, or even counterproductive. This research could identify subgroups and moderated effects, guided by theory-driven clinical profiles hypothesized to lead to divergent outcomes. Approaches to depression treatment must embrace complexity. It allows testing the possibility that different treatments engage different action mechanisms, depending on individual differences. By conducting theory-informed moderated-mediation analysis, researchers can gain deeper insights into the underlying mechanisms of interventions and thereby improve outcomes. We also need to evaluate distinct uses of MBCT combined with medication by differentiating between synchronous (ie, concurrent) and sequential (eg, offering MBCT when tapering or discontinuing medication) approaches. Achieving a balance between all of this and ensuring access and scalability involves considering broader social and environmental factors to guarantee equitable treatment accessibility.

The implications of the findings from this research could be crucial for informing and customizing interventions, ultimately improving treatment options for MDD. This highlights how translational science, through optimizing conceptual, methodological, and analytical approaches, can help us innovate treatments to improve depression outcomes. MBCT exemplifies this approach by advancing our understanding of effective and accessible interventions tailored to individual needs. It aligns with our quadruple aim of boosting mental health and population health, providing evidence-based choices, and maximizing effectiveness or cost-effectiveness through optimized action mechanisms in accessible solutions. We advocate for incremental improvements in depression treatments through a global population health lens. By leveraging translational science, we can enhance access, engagement, and treatment outcomes for depression. This work uses MBCT as a foundational case study and delineates future research directions with the potential to profoundly impact service design and policy.

ARTICLE INFORMATION

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Additional Contributions: Dr Montero-Marin thanks the Department of Psychiatry at the University of Oxford, United Kingdom, and the Spanish Consorcio Centro de Investigación Biomédica en Red MP of Epidemiology and Public Health for its support.

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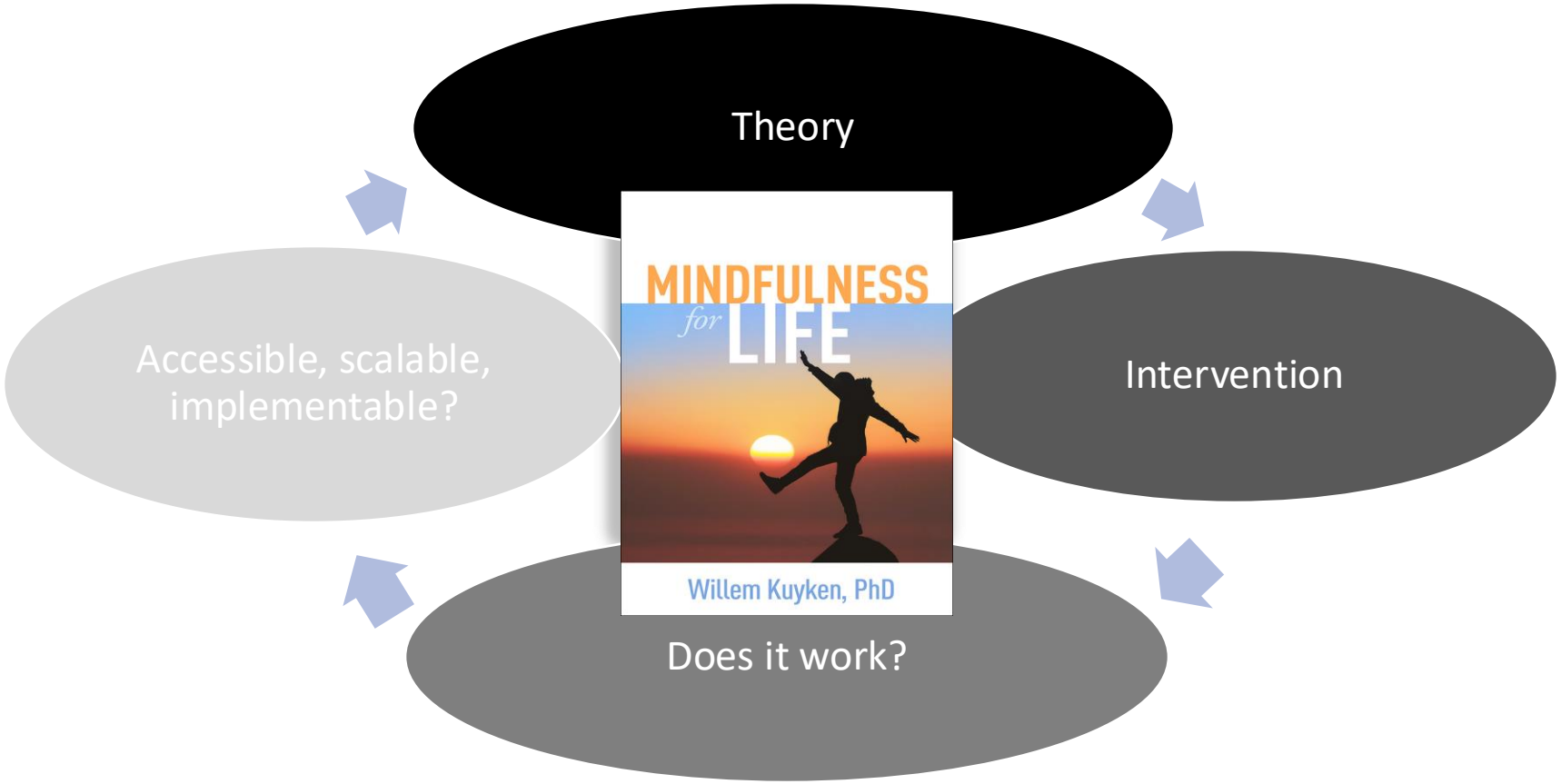
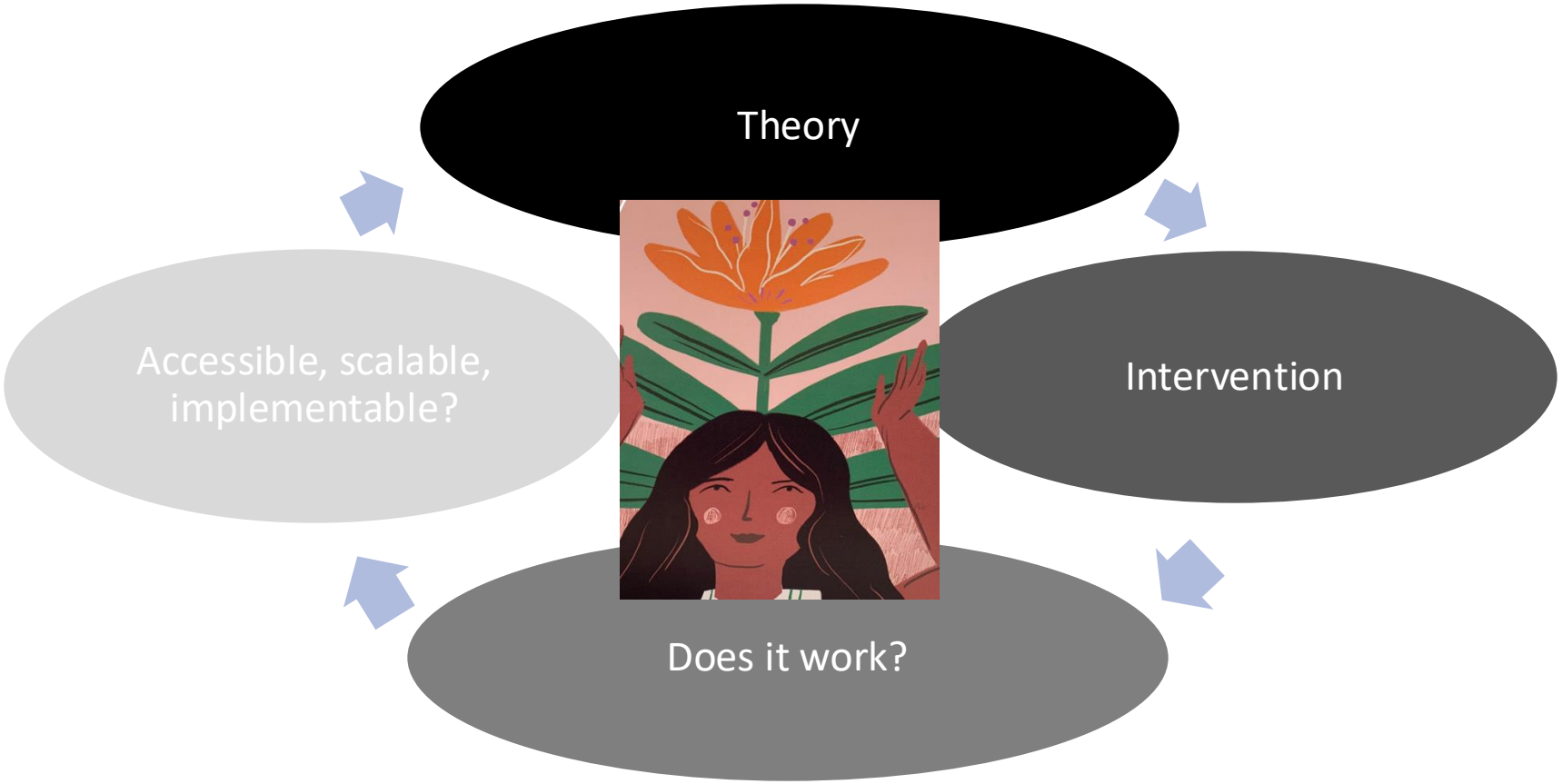
10. Montero-Marin J, Allwood M, Ball S, et al; MYRIAD Team. School-based mindfulness training in early adolescence: what works, for whom and how in the MYRIAD trial? *Evid Based Ment Health*. 2022;25(3):117-124. doi:10.1136/ebmental-2022-300439

Translational Science: An Evolving Story



https://bit.ly/m/MindfulnessforLife

A *Flourishing* Translational Science Story



Definition

Thesis

Conceptual Model

Abductive

Mechanisms

Systematic review

Toolkit

Living glossary of key terms
- Operational definitions
- Measures

Methods guidance
- Observational
- Case studies
- Experimental (RCTS)

Projects/Case Studies

Living Labs

PPIE

Conceptual Definition

"E-co-flourishing is pursuing one's own flourishing along with the flourishing of ecological systems, collectives and their members (human and otherwise). It is to engage in modes of flourishing that promote and enhance, rather than hinder, the flourishing of other natural entities and, indeed, other *kinds* of entities."

Moore et al (in preparation)

Operational Definition

Conceptual definition → Operational definition → Proxy Measurement

Maloney et al (in preparation)

Outcomes: Individual & Collective

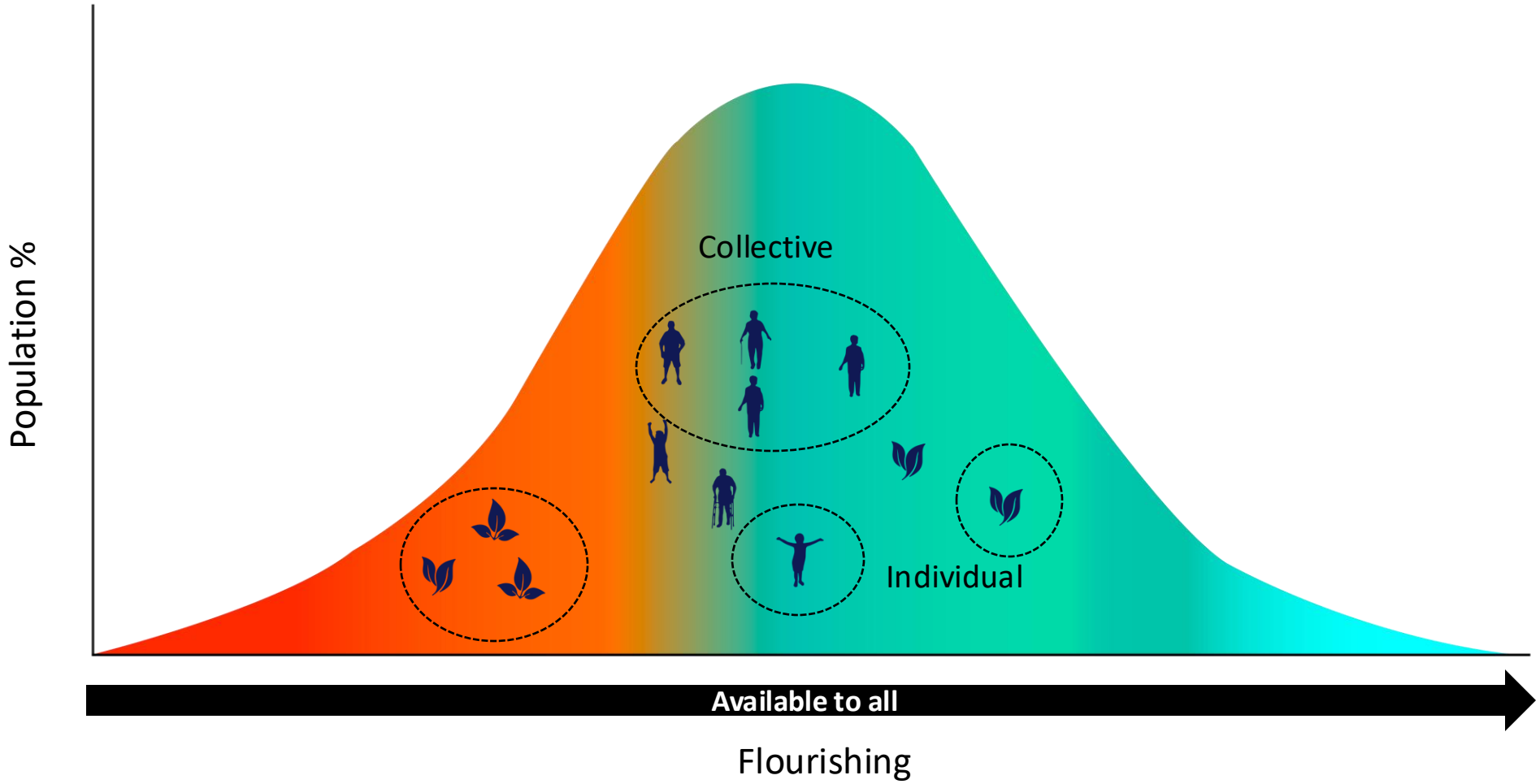


Image by Delphine Perrot

Maloney et al (in preparation)

Outcomes: Multi-dimensional

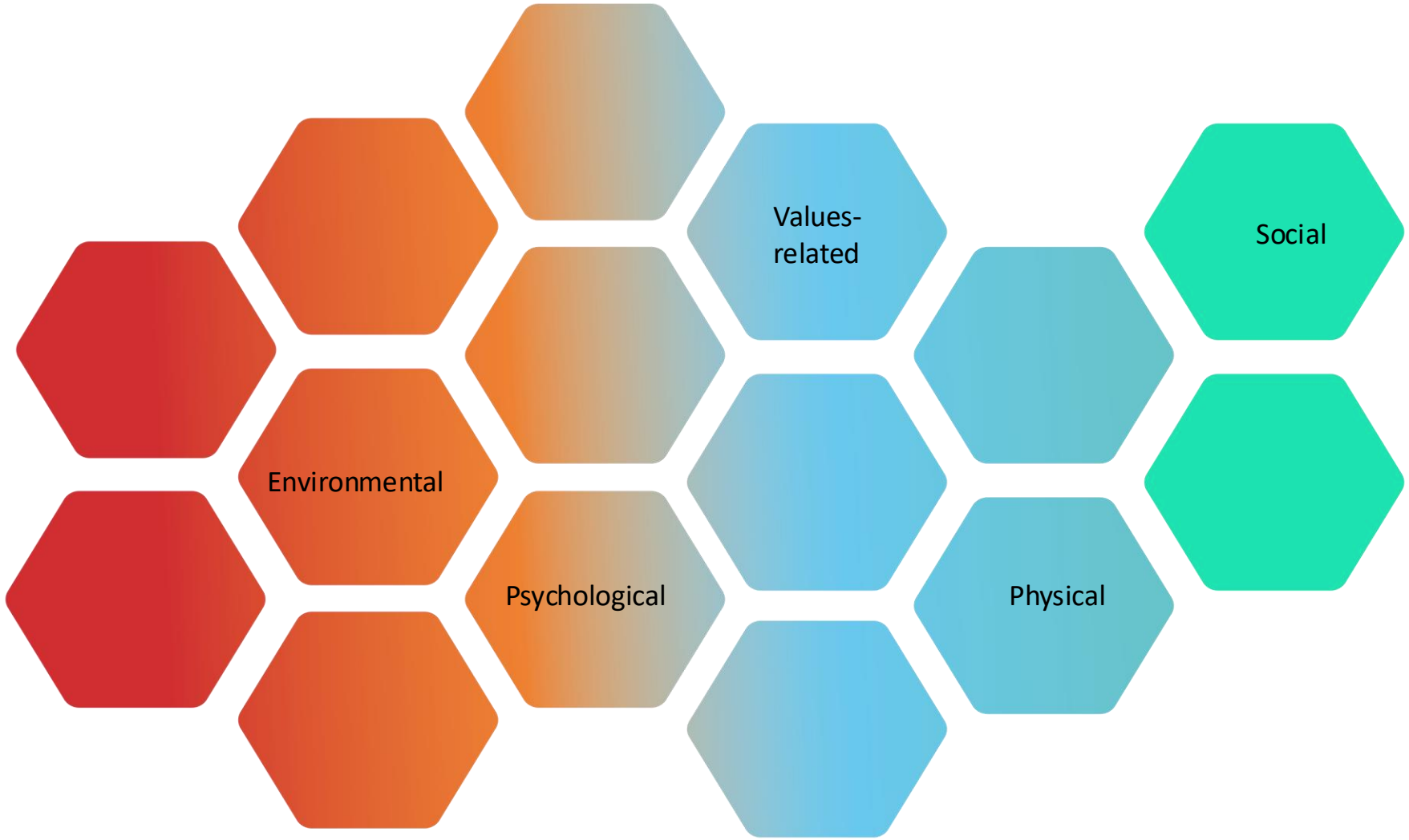


Image by Delphine Perrot

Maloney et al (in preparation)

Outcomes: Dynamic & Across the Lifespan

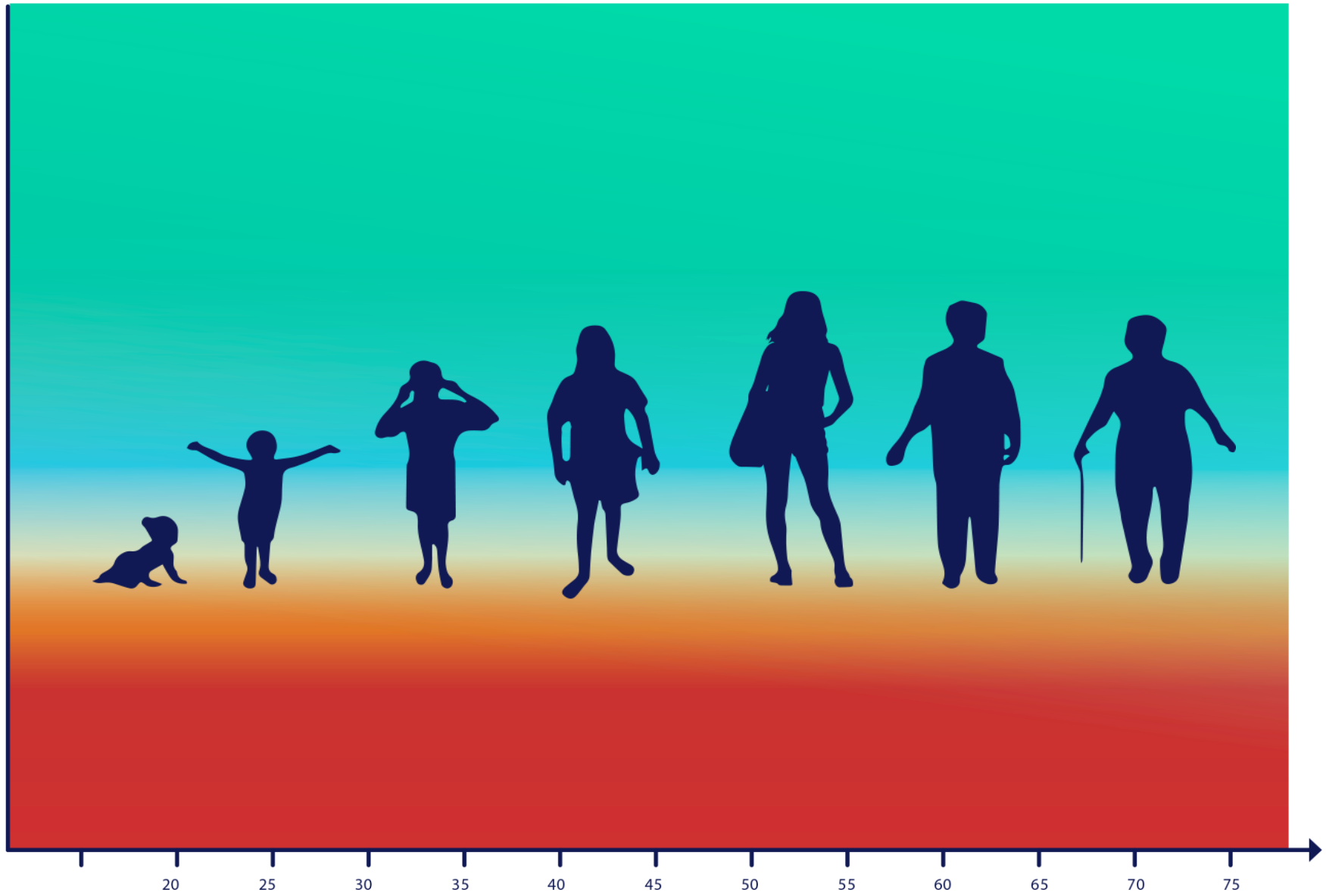


Image by Delphine Perrot

Maloney et al (in preparation)

Outcomes: Dynamic & Across the Lifespan

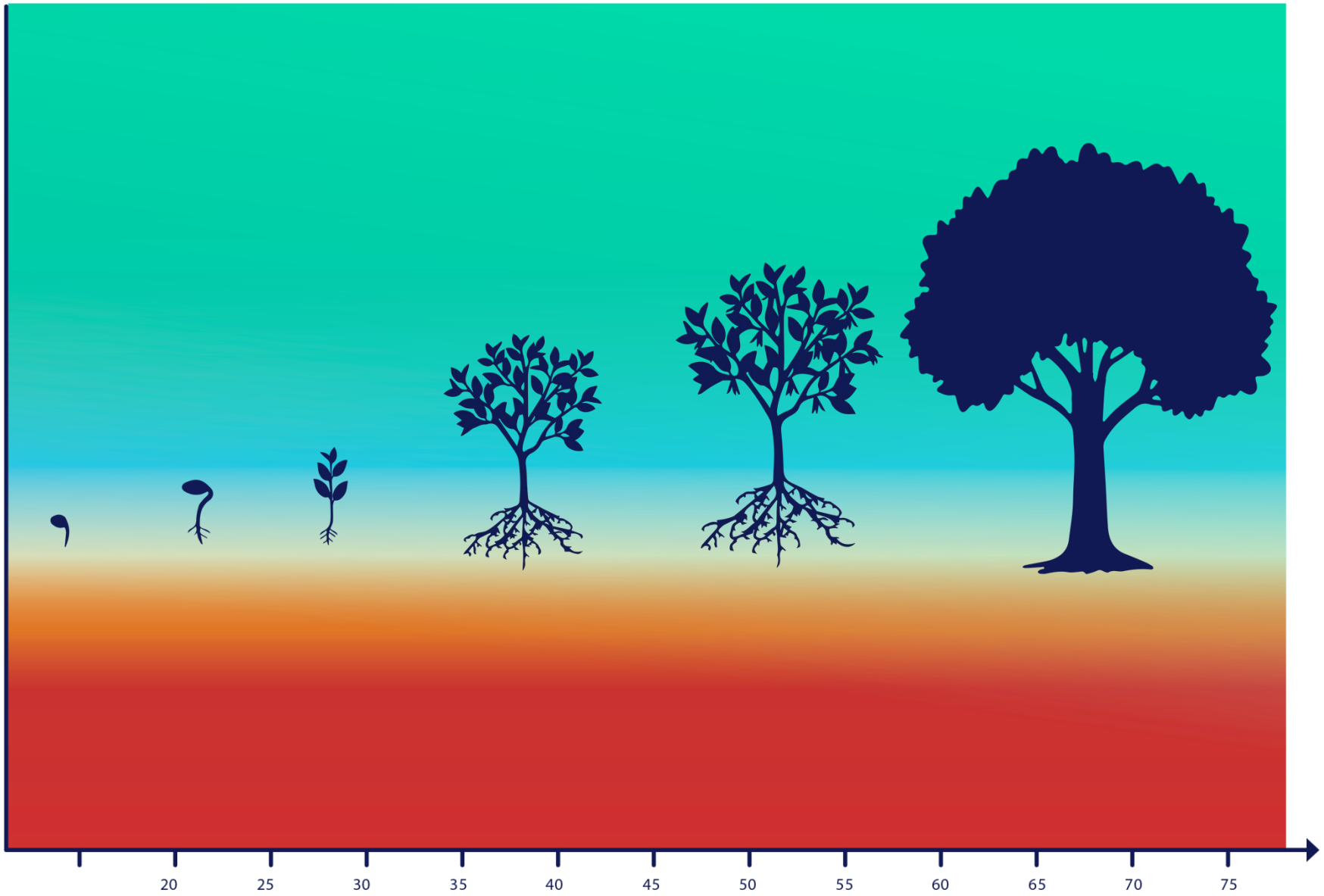


Image by Delphine Perrot

Maloney et al (in preparation)

Outcomes: Relational

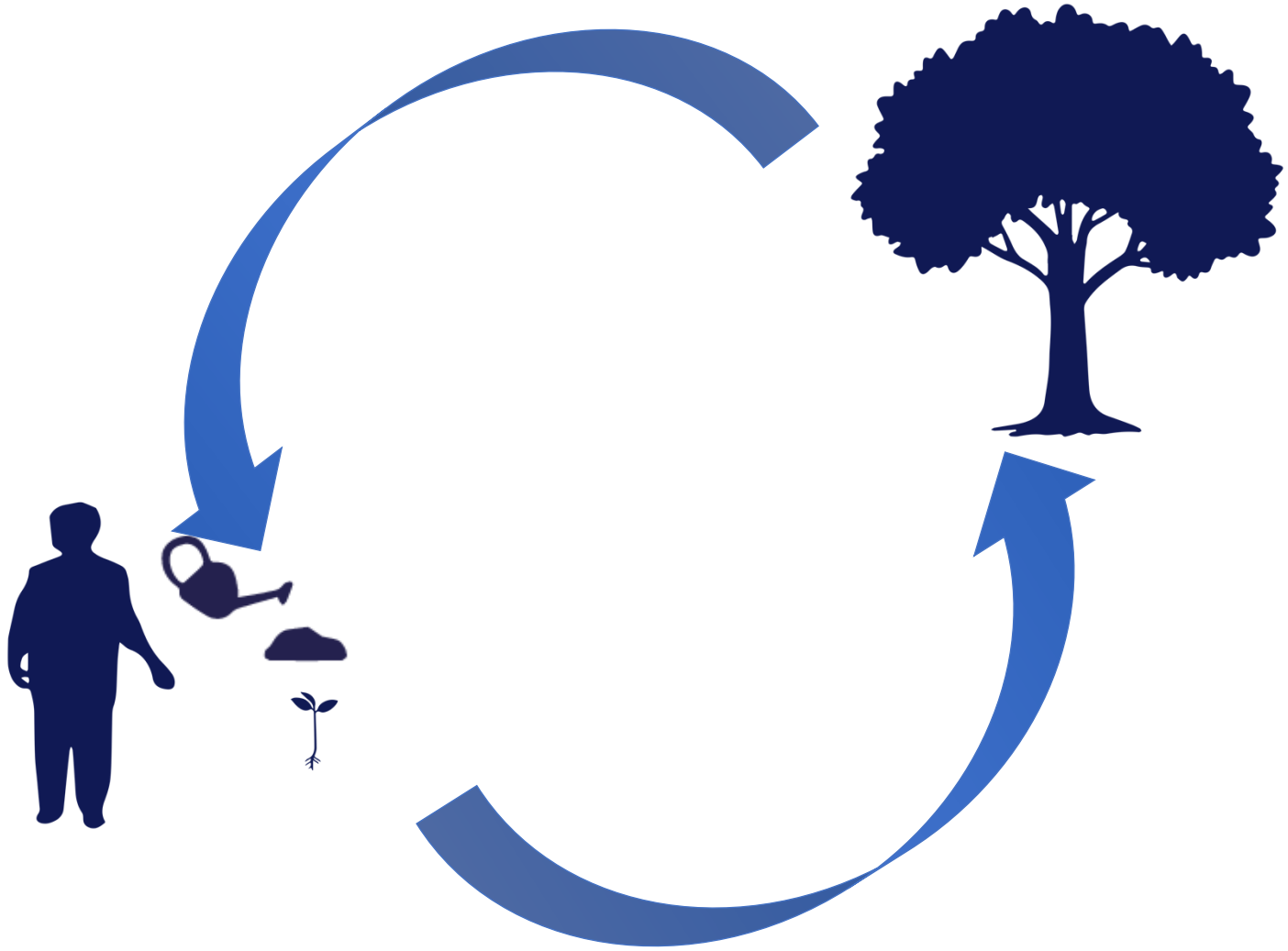
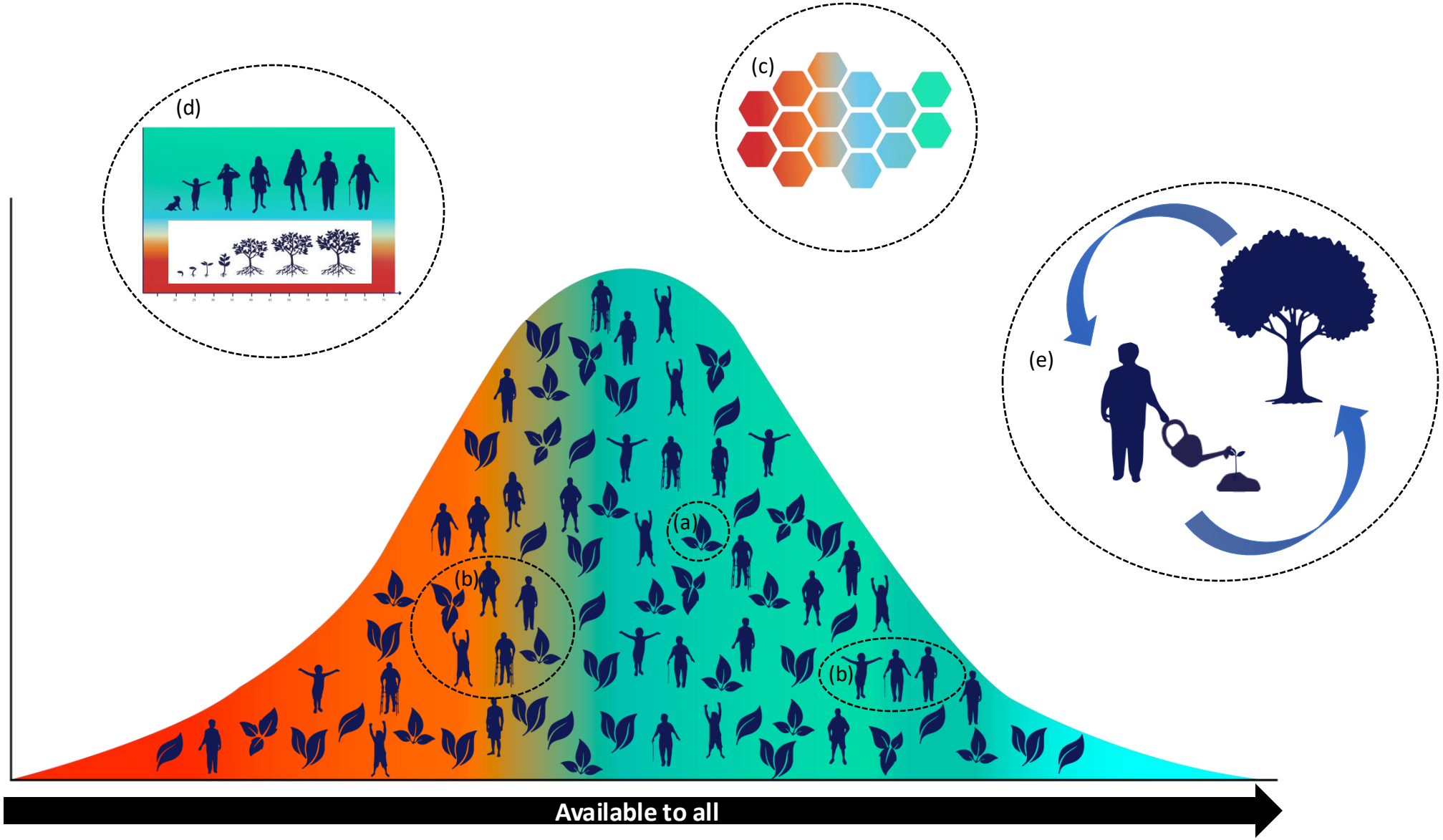


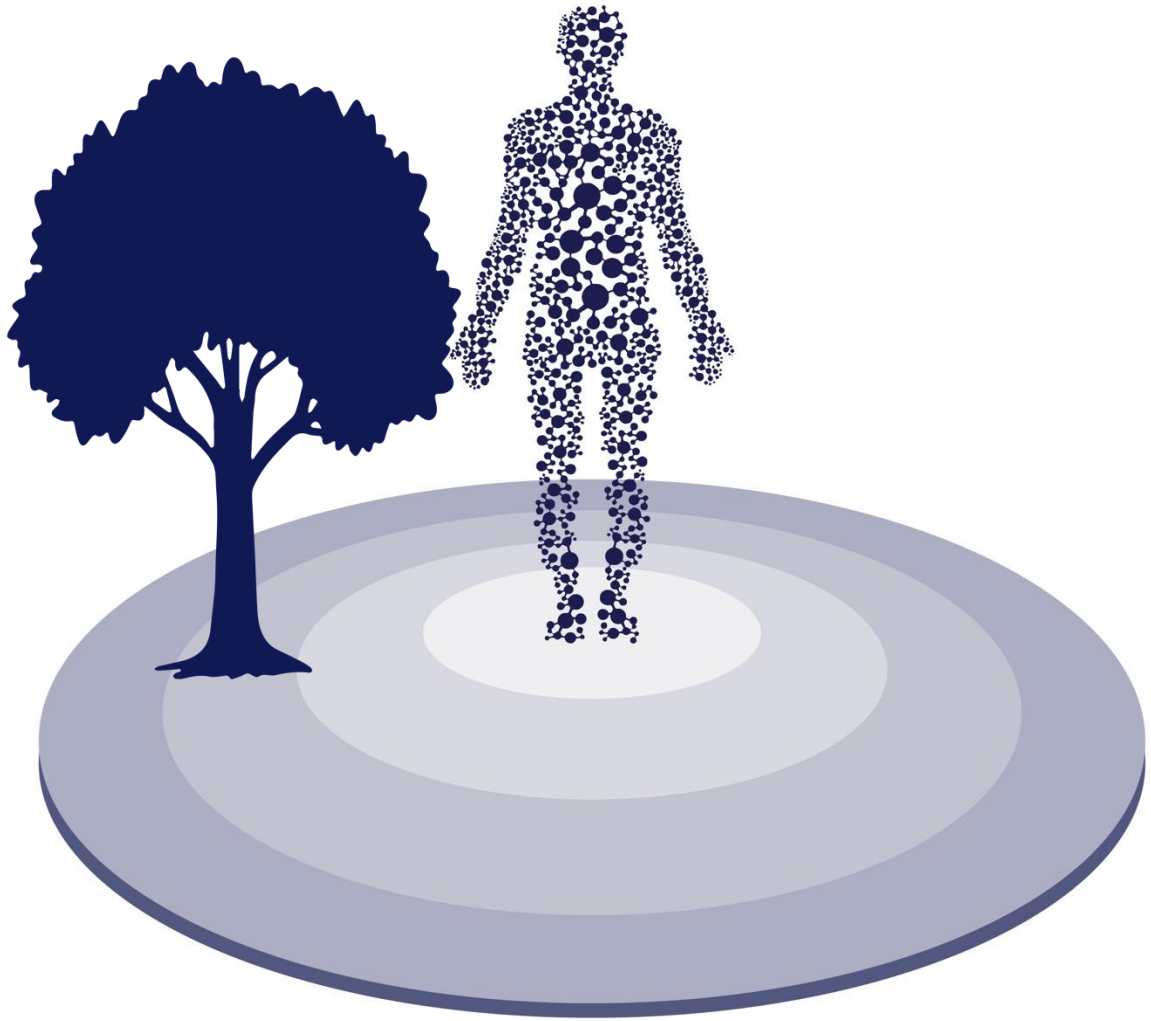
Image by Delphine Perrot

Maloney et al (in preparation)



Key: (a) individual; (b) collective; (c) multi-dimensional; (d) dynamic; and (e) relational

Maloney et al (in preparation)



Key levels:

Individual

Microsystem

Mesosystem

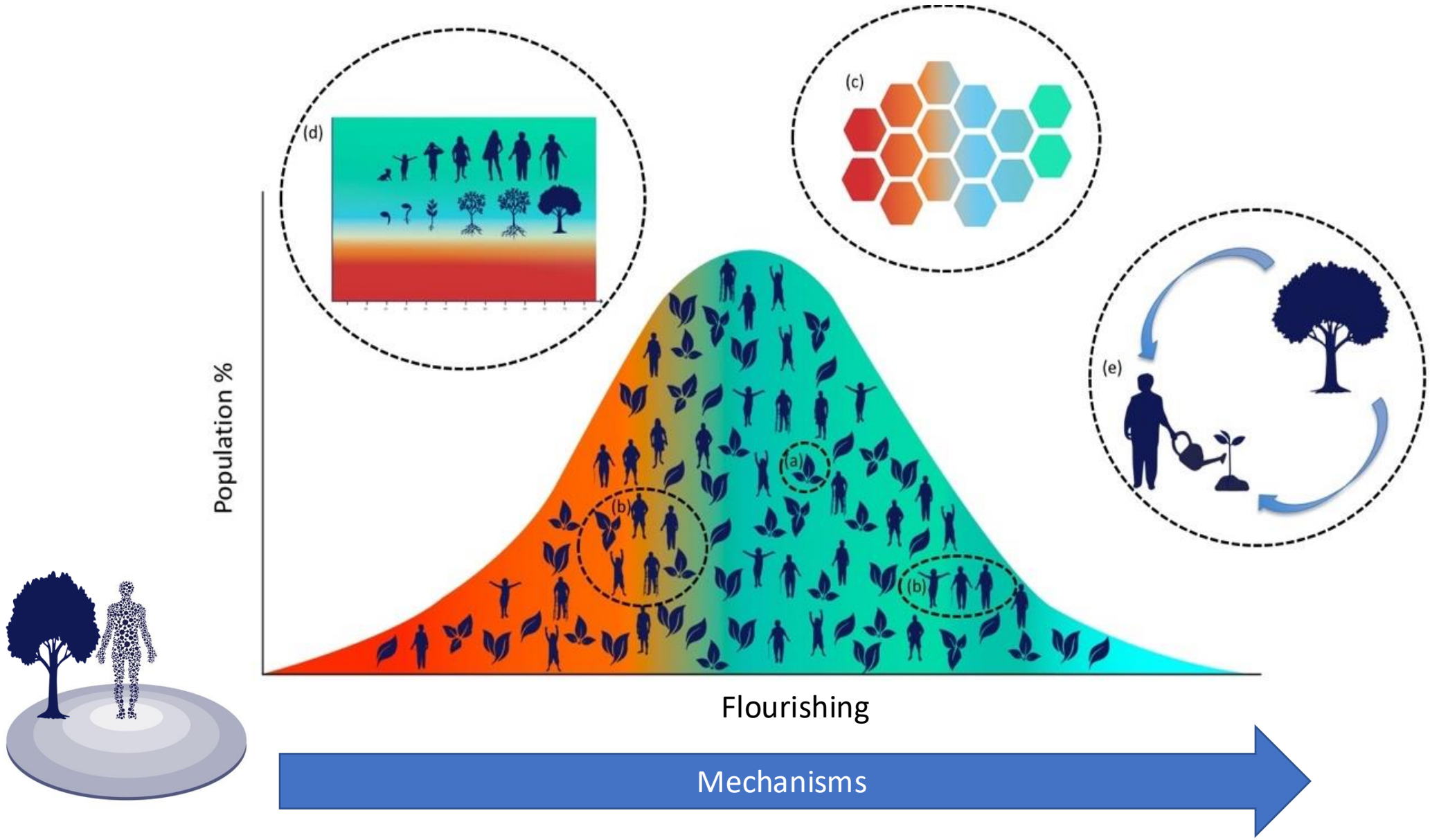
Exosystem

Macrosystem

Chronosystem

Image by Delphine Perrot

Bronfenbrenner, 1994; Maloney et al (in preparation)



Maloney et al (in preparation)

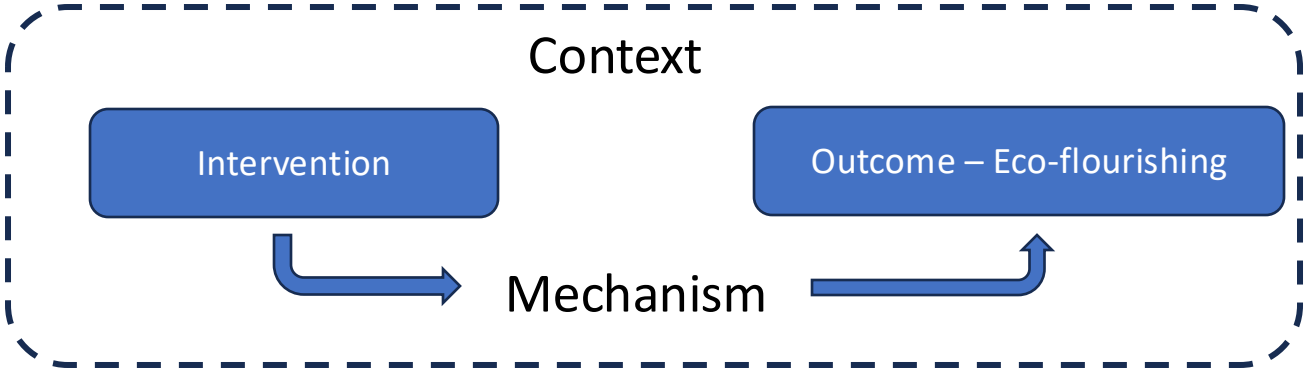
The Living Glossary: Operational Definitions and Measurements

[Conceptual definitions](#)

[Research definitions](#)

BRC webpage: https://oxfordhealthbrc.nihr.ac.uk/research/flourishing-wellbeing

E-Co-Flourishing Framework: Research & Innovation



1. Identify key questions
2. Select appropriate methods
3. Analysis
4. Write up and dissemination

Study Designs

- Observational
- Case Study
- Experimental
- Systematic Reviews & Meta-analysis

Moderators

Key levels:

Individual

Microsystem

Mesosystem

Exosystem

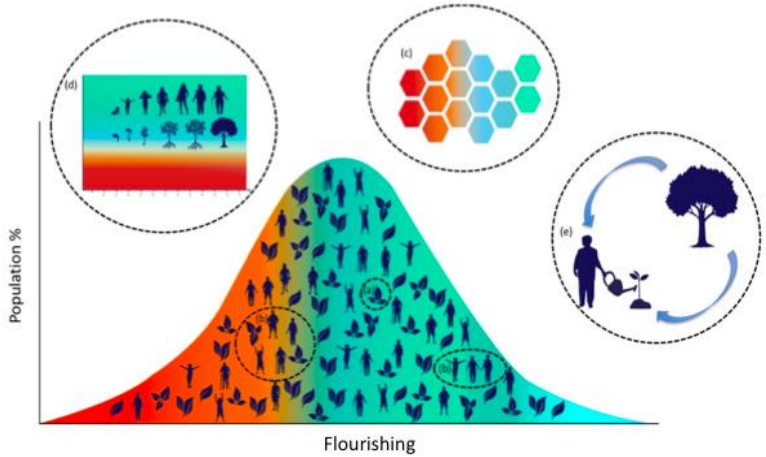
Macrosystem

Chronosystem

Intervention

What?

Outcomes

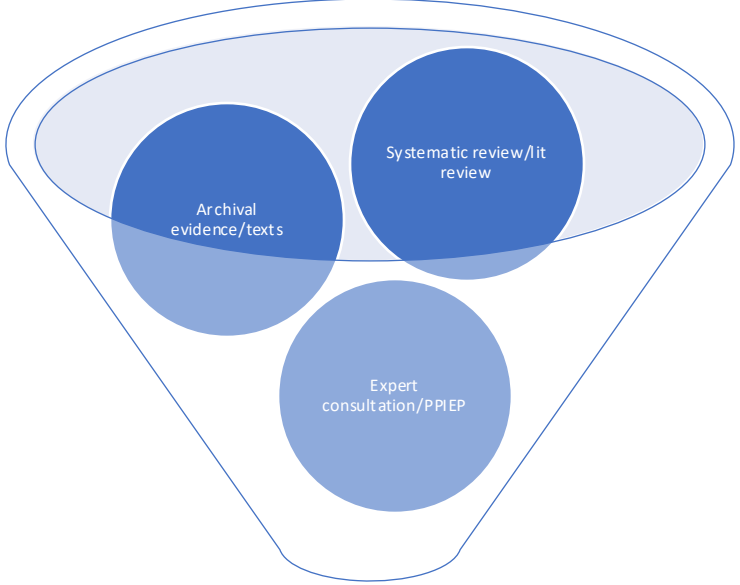


Mechanisms

How? Why?

Maloney et al (in preparation)

Mechanisms



Psychological

e.g., attention/awareness, emotional regulation, mindfulness, awe, decentering, nature connection

Physical

e.g., energy/vitality, physical exercise

Social

e.g., social cohesion, community belonging, play

Environmental

e.g., noise, heat, air pollution

Charlotte

Sasha

BJ Psych Review (Lomax et al., 2024); BMJ Mental Health Review (Maloney et al., 2024)

A Systematic Umbrella Review

Start date: August 17th, 2024

Review stage	Started	Completed
Preliminary searches	Yes	No
Piloting of the study selection process	Yes	No
Formal screening of search results against eligibility criteria	Yes	No
Data extraction	No	No
Risk of bias (quality) assessment	No	No
Data analysis	No	No

PROSPERO Registration:

https://www.crd.york.ac.uk/prospero/#recordDetails

PROSPERO
International prospective register of systematic reviews

NHS National Institute for Health Research

UNIVERSITY of York
Centre for Reviews and Dissemination

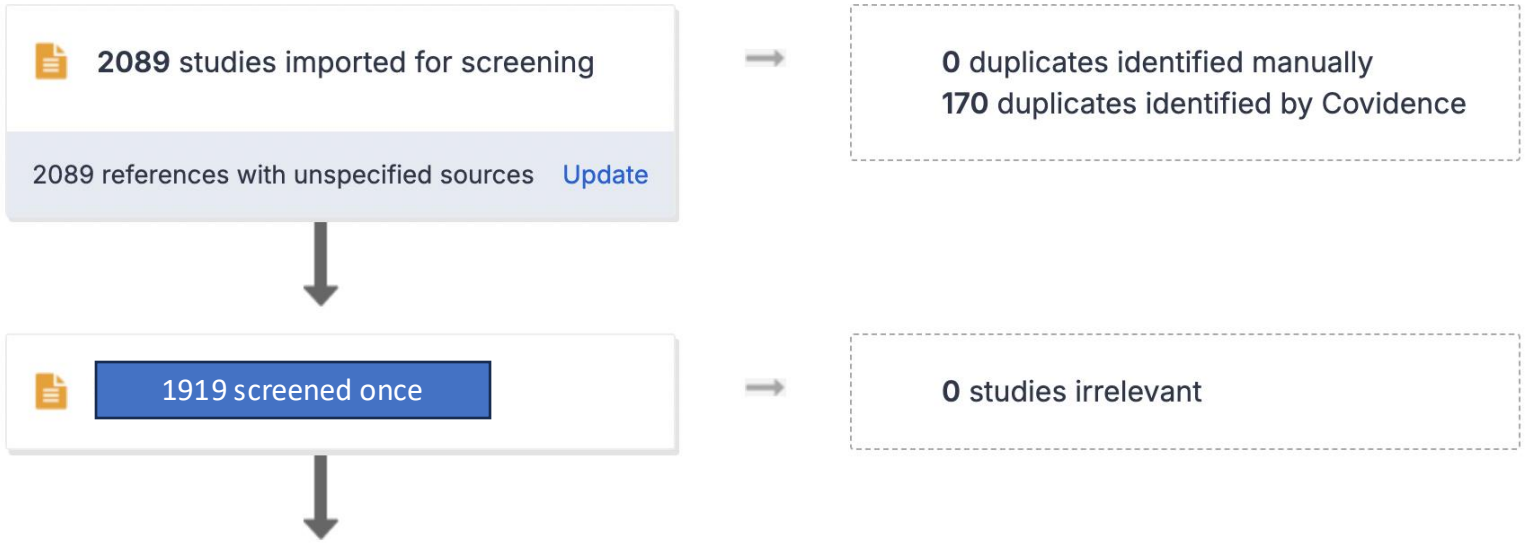
Systematic review

This record cannot be edited because it has been marked as out of scope

1. * Review title.

Give the title of the review in English

Mechanisms underpinning flourishing at the interface of humans and other natural entities: A systematic abductive umbrella review


2089 studies imported for screening
2089 references with unspecified sources
Update
0 duplicates identified manually
170 duplicates identified by Covidence
1919 screened once
0 studies irrelevant

A Program of Work

How do humans flourish, individually and collectively?

How do other species flourish, individually and collectively?

What supports the flourishing of ecosystems?

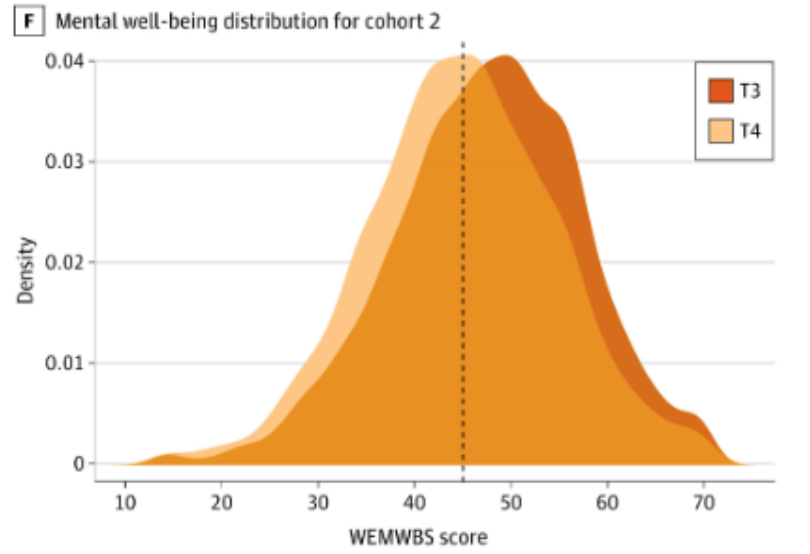
What interventions support e-co-flourishing?

What are the mechanisms, mediators, moderators and indirect effects by which interventions have these outcomes?

…at individual micro, meso, and macro levels.

Joseph Moore and Shannon Maloney

Case Studies - 1



JAMA Netw Open. 2023 Sep; 6(9): e2335016.
Published online 2023 Sep 21. doi: 10.1001/jamanetworkopen.2023.35016
PMCID: PMC10514742
PMID: 37733343

Young People's Mental Health Changes, Risk, and Resilience During the COVID-19 Pandemic

Jesus Montero-Marin, PhD, [1,2,3] Verena Hinze, PhD, [1] Karen Mansfield, PhD, [1] Yasmijn Slaghekke, MSc, [1] Sarah-Jayne Blakemore, PhD, [4] Sarah Byford, PhD, [5] Tim Dalgleish, PhD, [6] Mark T. Greenberg, PhD, [7] Russell M. Viner, PhD, [8] Obioha C. Ukoumunne, PhD, [9] Tamsin Ford, PhD, [10] Willem Kuyken, PhD,[✉1] and *and the* MYRIAD Team

Case Studies - 2

Symbol of Singapore and its efforts to promote green space, these "Supertrees" belong to a display at the 250-acre Gardens by the Bay. The high-tech structures range from 80 to 160 feet and collect solar energy to power a nightly light show. They have a softer side too: their trunks are vertical gardens, laced with more than 150,000 living plants.
PHOTOGRAPH BY LUCA LOCATELLI, INSTITUTE

URBAN INNOVATOR

This City Aims to Be the World's Greenest

https://www.nationalgeographic.com/environment/article/green-urban-landscape-cities-Singapore

Schools in Singapore impose phone bans to reduce distractions, rekindle social interaction
France, Finland and China have also banned the use of mobile phones in schools. Read more at straitstimes.com.
www.straitstimes.com

https://www.straitstimes.com/singapore/schools-in-s-pore-impose-phone-bans-to-reduce-distractions-rekindle-social-interaction 16:34

Case Studies - 3

- **Promoting Mental Health, Resilience and Agency amongst Youth with Eco-distress and Climate Anxiety**

Children's health

Children at 'existential risk' from climate crisis, UK's top paediatrician says

Exclusive: Physical and mental impact on young people needs immediate action, Dr Camilla Kingdon says

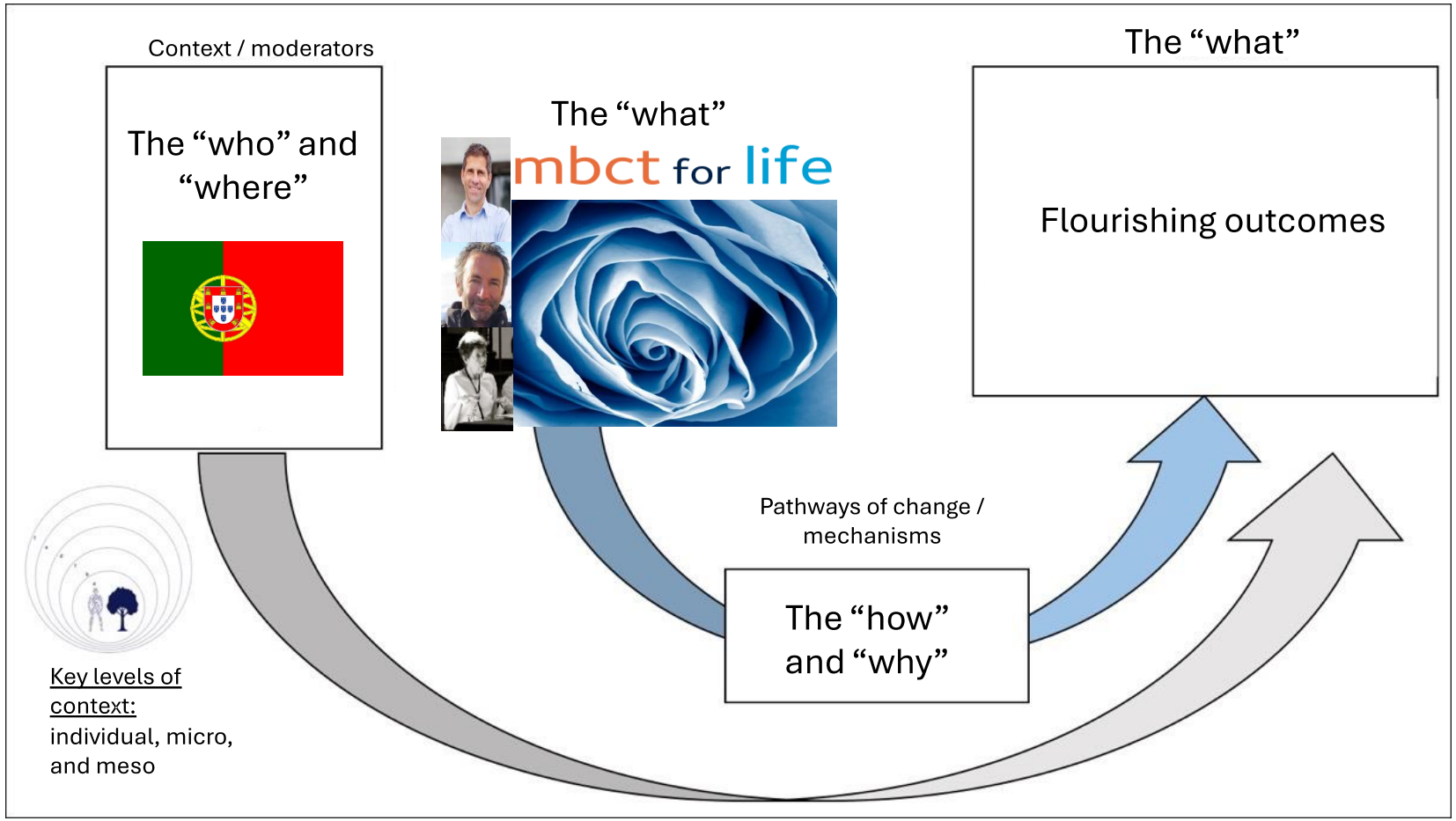
Andrew Gregory *Health editor*

@andrewgregory

Sat 21 Oct 2023 06.00 BST

Children are experiencing significant mental health effects from the climate crisis, such as PTSD, depression and anxiety, Kingdon says. Photograph: Peter Marshall/Alamy

Case Studies - 4



Marie Skłodowska-Curie Actions

NIHR | Oxford Health Biomedical Research Centre

Flourishing & Wellbeing

Investigating how non-clinical environments might be utilised to enhance public health and mental health

Main Aim: To enable flourishing initiatives and interventions for patients and non-patients, delivered in spaces beyond the clinic.

How?

Ilina Singh