





GBGI and mental health and wellbeing: a Review

Nerea Calvillo

Associate professor

University of Warwick











Engineering and Physical Sciences Research Council





Project Aims



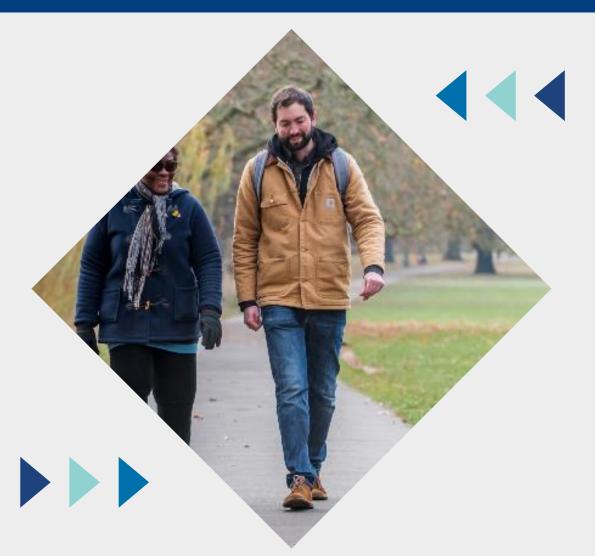
» Undertake a systematic review of evidence supporting the use of Green-Blue infrastructure to impact mental health and wellbeing in urban areas.

» Team :

Luis Inostroza	Mendel University Brno	Czech Republic
Lee Bryant	University of Bath	UK
Yang Lu	York St John University	UK
Zaheer Nasar	Cranfield University	UK
Tariqul Islam	Cranfield University	UK
Alexandra Collins	Imperial College London	UK
Akyla Abraham	University of Reading	UK
Thuy Nguyen	Imperial College London	UK
Nikolas Thomopoulos	University of Surrey	UK
Anna Bornioli	University of Surrey	UK
Jessica Felappi	University of Bonn	Germany
Danial Wyn Owen	Centre for Ecology & Hydrology Environment Centre Wales	UK
Yijie Geng	University of Warwick	UK
Javier Garcia-Martinez	University of Warwick	UK

Mental health





Mental health is a state of mental well-being that enables people to cope with the stresses of life, realize their abilities, learn well and work well, and contribute to their community. It is an integral component of health and well-being that underpins our individual and collective abilities to make decisions, build relationships and shape the world we live in. Mental health is a basic human right. And it is crucial to personal, community and socio-economic development.

Mental health is more than the absence of mental disorders. It exists on a complex continuum, which is experienced differently from one person to the next, with varying degrees of difficulty and distress and potentially very different social and clinical outcomes.

Determinants of mental health:

Throughout our lives, multiple individual, social and structural determinants may combine to protect or undermine our mental health and shift our position on the mental health continuum.

WHO 17 June 202





study_id	treatment_type (how the authors name it)	intervention_classification	treatment size	reatment_size_lownent_size_
901	woodland	woodland	ıl Belgium residentia	l area
	low green	srubland		
	garden	private garden		
	grassland	grass		
902	grass	grass	0-4	
			5-9	
			10-19	
			20-29	
			>30	
904	grass (trees, concrete)	land cover	90	satellite image
005				. 10. 1
905	grass-herbs	land cover		satellite image
	grass-herbs			
	shrub			
906	shrub			
906	tree cannopies			
	grass green spaces			
907	trees	land cover	0-2	
307	trees	iana cover	2-16.96	
	trees		16.97-98.69	
	grasslands		0-25	
	grasslands		0.25-2.06	
	grasslands		2.07-39.7	
	fields		<13.38	
	fields		13.38-36.11	
	fields		>36.12	
909	Allotment gardens	Arable agriculture		
910	Allotment gardens	Arable agriculture	0.05 to 0.47	
				illotments (1836 plots)
			Allotment sites rang	ge between 0.05 and 0.47 ha
044			10.000	
911	Community Garden	Arable agriculture	10.000	

» Treatment type:

- » Not by intervention, but other parameters: land cover, vegetation height, etc.
- » Intervention classification:
- » Difficult to match them.
- » Treatment size:
- » Often missing. More image and time based.





Main outcome description	Oucome measure
Perception of the value and importance of forests	Questionnaire. 15 Likert scale questions (14 4-point Likert scale, 1 6-point Likert scale)
Pro-environmental behavior	Questionnaire. 15 Likert scale questions (14 4-point Likert scale, 1 6-point Likert scale)
Societal expectations on the role and ecosystem s	Questionnaire. 15 Likert scale questions (14 4-point Likert scale, 1 6-point Likert scale)
Positive Affect Pre (Baseline for all)	Positive and Negative Affect Schedule (PANAS)
Negative Affect Pre (Baseline for all)	Positive and Negative Affect Schedule (PANAS)
Perceived reconstructive outcomes (Baseline)	Restorative Outcome Scale (ROS)
Vitality (Baseline)	Subjective Vitality Scale (SVS)
Mood state	Profile of Mood States (POMS) scale (Total disturbance)
Positive Affect Post	Positive and Negative Affect Schedule (PANAS)
Negative Affect Post	Positive and Negative Affect Schedule (PANAS)
Perceived reconstructive outcomes	Restorative Outcome Scale (ROS)
Vitality	Subjective Vitality Scale (SVS)
Mood state	Profile of Mood States (POMS) scale (Total disturbance)
Positive Affect Post	Positive and Negative Affect Schedule (PANAS)
Negative Affect Post	Positive and Negative Affect Schedule (PANAS)
Perceived reconstructive outcomes	Restorative Outcome Scale (ROS)
Vitality	Subjective Vitality Scale (SVS)
Mood state	Profile of Mood States (POMS) scale (Total disturbance)
Positive Affect Post	Positive and Negative Affect Schedule (PANAS)
Negative Affect Post	Positive and Negative Affect Schedule (PANAS)
Perceived reconstructive outcomes	Restorative Outcome Scale (ROS)
Vitality	Subjective Vitality Scale (SVS)
Mood state	Profile of Mood States (POMS) scale (Total disturbance)
Positive Affect Post	Positive and Negative Affect Schedule (PANAS)
Negative Affect Post	Positive and Negative Affect Schedule (PANAS)
Perceived reconstructive outcomes	Restorative Outcome Scale (ROS)
Vitality	Subjective Vitality Scale (SVS)
Mood state	Profile of Mood States (POMS) scale (Total disturbance)
Mandal banks	NAIO E
Mental health	WHO-5 scores
	Bernoulli gener-alised linear mixed effects models
Mental health	WHO-5 scale
Mental health	WHO-5 scale
Mental disorder	
Stress	
Behaiviour Code for the conflict	
Satisfaction of life	N
Depression	Newcastle–Ottawa Scale (NOS)
Mental health	
Anxiety	
Schizophrenia	
Mental health	Restorative Components Scale (RCS)

- » Outcomes:
- » Almost each paper uses a different descriptor.
- » Positive and negative > benefits and disbenefits?
- » Outcomes measure:
- » Almost each paper uses a different form of measurement/index
- » Country-related variations
- » Data:
- » Numbers, index, gradients, positive/negative, etc

Workflow



