the social biobehavioural research group

World Health Organization

The health benefits of arts & cultural engagement:

zooming from psychobiological mechanisms to population-level effects

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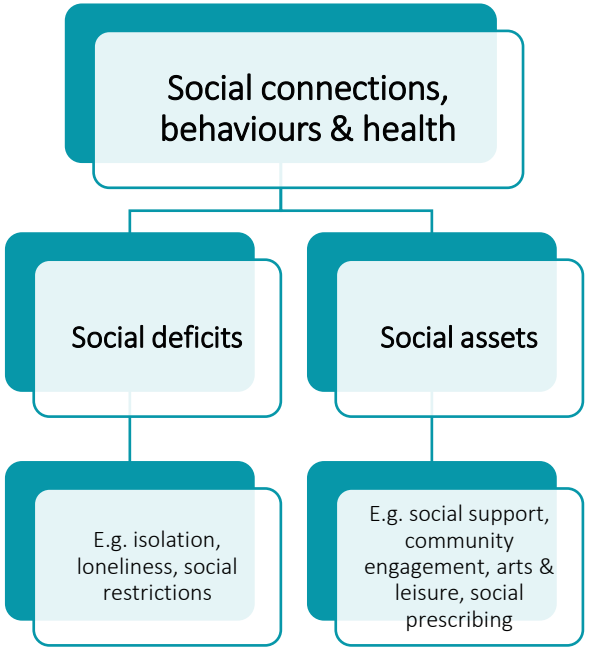
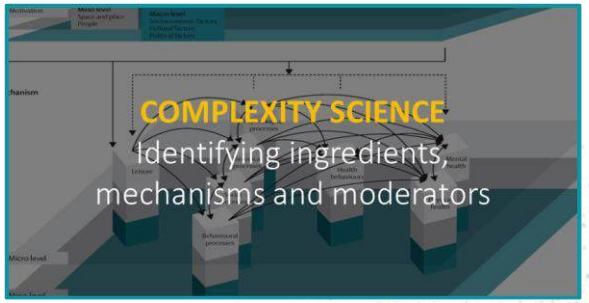
Director, WHO Collaborating Centre on Arts & Health

sbbresearch.org

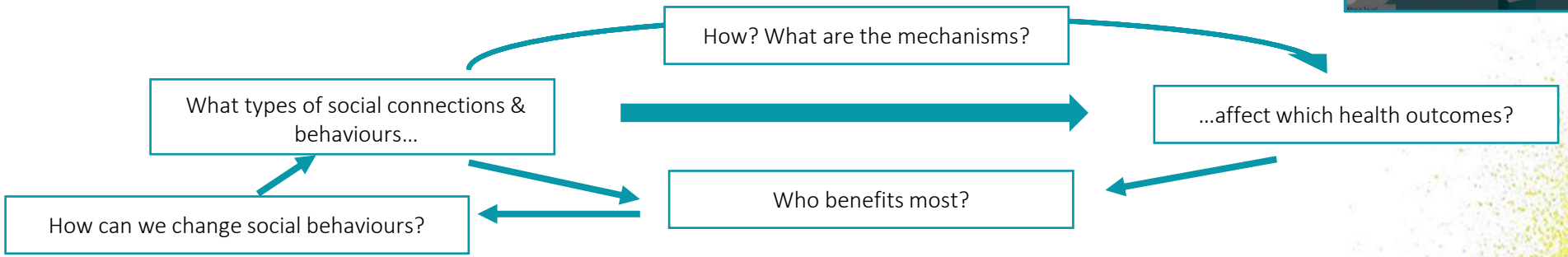
UCL

Our Focus





Our research questions



Performing arts
e.g. music, dance, theatre, film, etc.

Visual arts & craft
e.g. crafts, textiles, painting, photography, sculpture, etc.

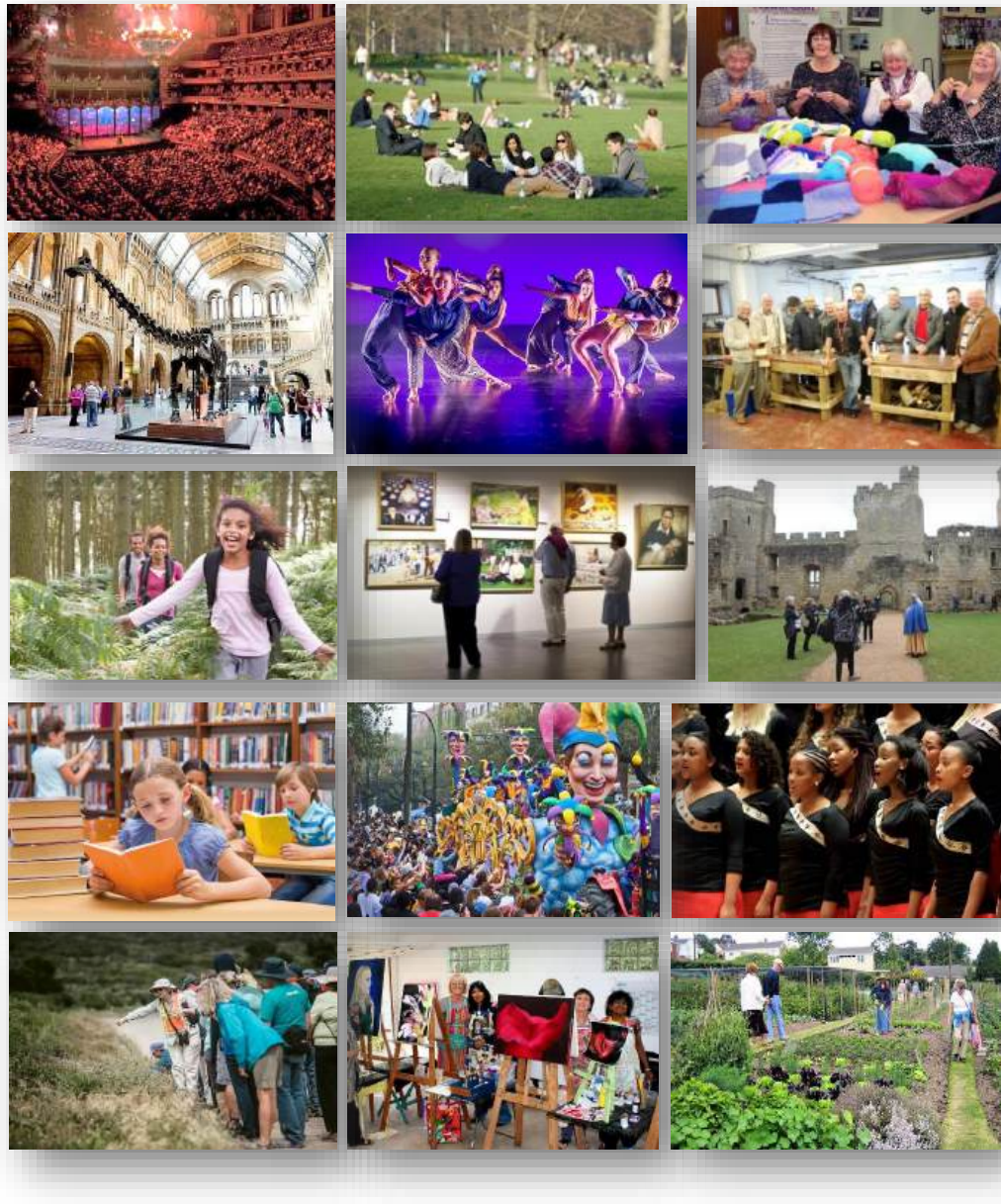
Digital and electronic arts
e.g. animations, photography, digital art, electronic art, etc.

Literature
e.g. writing, reading, attending literary festivals etc.

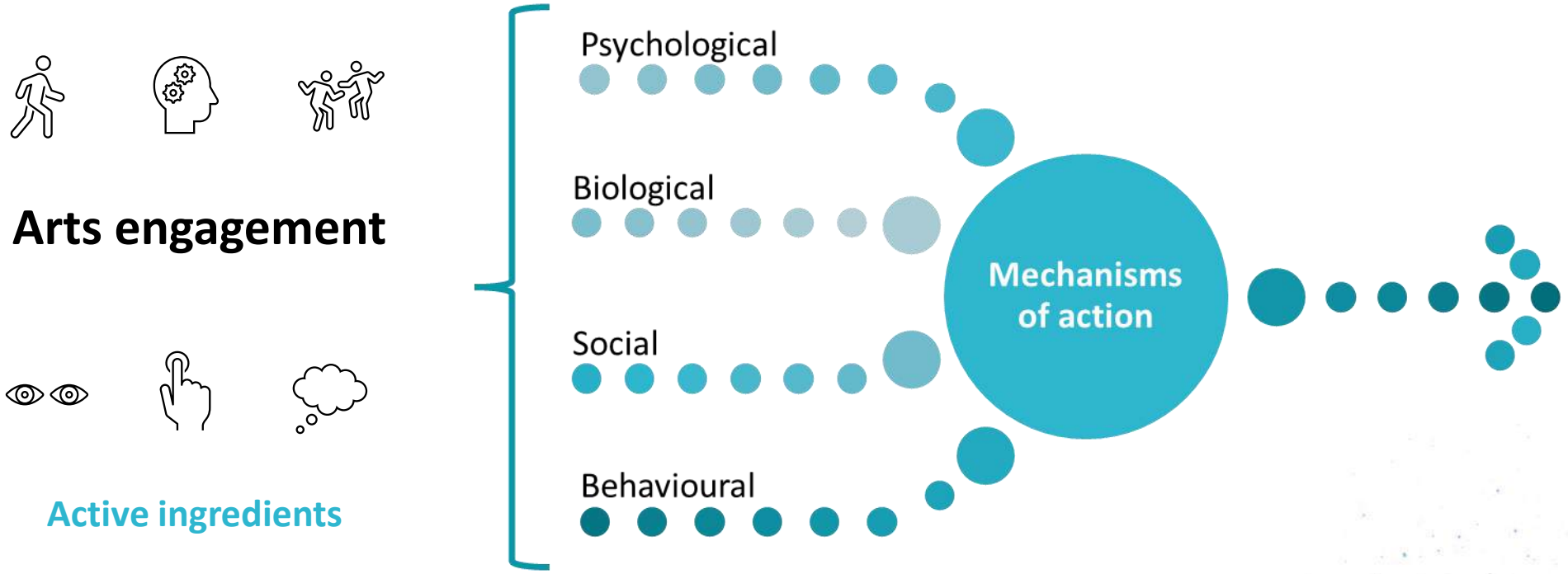
Culture
e.g. going to museums, galleries, art exhibitions, concerts, the theatre, community events, cultural festivals, fairs etc.

Heritage
e.g. visiting stately homes, parks, monuments, historical sites etc.

Design & environment
e.g. architecture, interior design, light, sound etc.



How arts affect health



Active Ingredients:
INNATE Framework

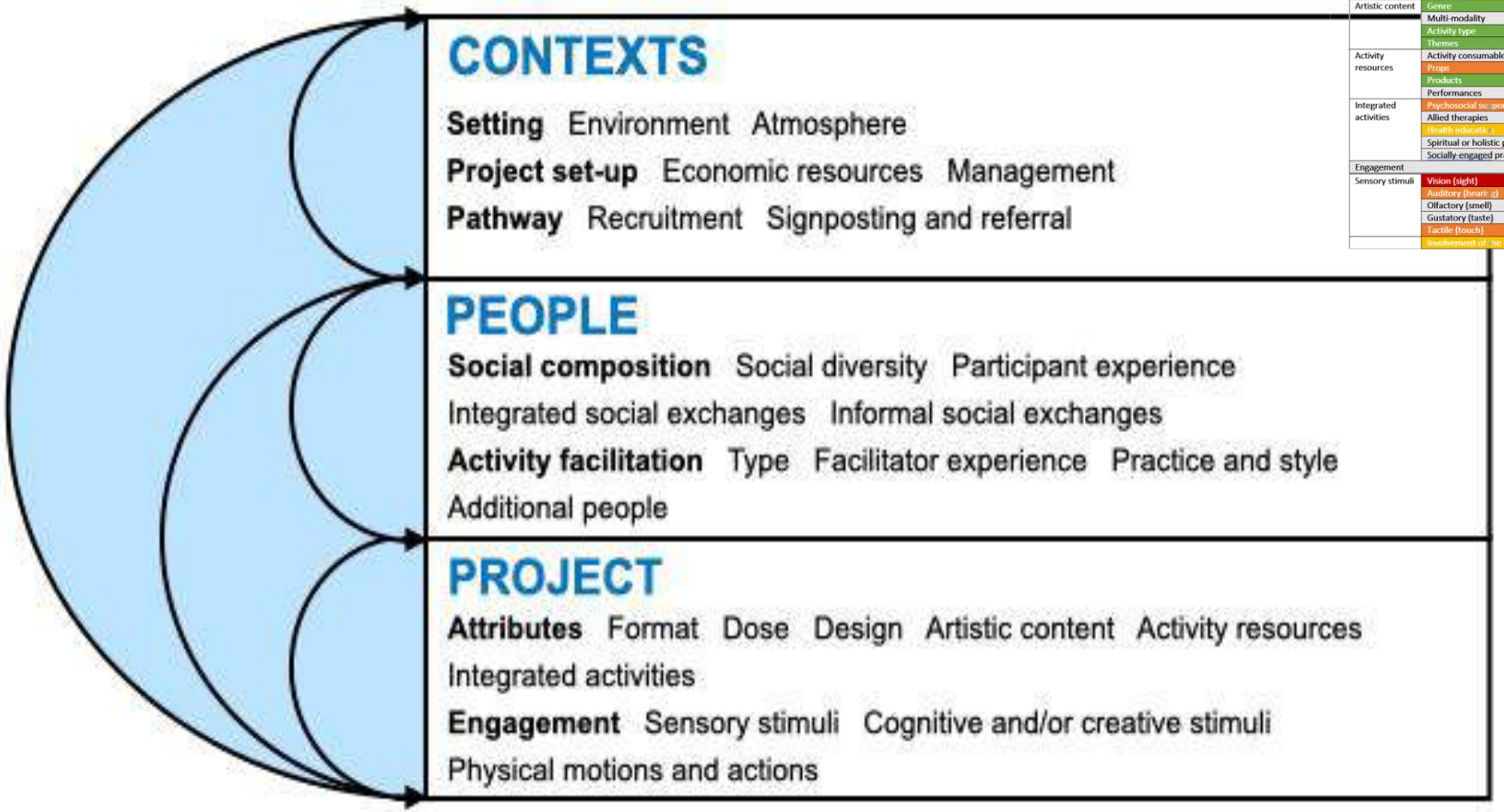


Figure 1: Colour chart comparing ingredients of M4M-online vs M4M in-person

Key

	Similar active ingredients
	Some differences, some similarities
	Different active ingredients
	N/A for activity

PROJECT	
Attributes	
Format	Mode
	Synchroneity
	Activity level
Dose	Frequency
	Duration
	Maintenance
Design	Structure
	Guiding
	Project approaches
	Personalisation
	Challenge
	Goal orientation
	Feedback
Artistic content	Genre
	Multi-modality
	Activity type
	Themes
Activity resources	Activity consumables
	Props
	Products
	Performances
Integrated activities	Psychosocial support
	Allied therapies
	Health education
	Spiritual or holistic practice
	Socially-engaged practice
Engagement	
Sensory stimuli	Vision (sight)
	Auditory (hearing)
	Olfactory (smell)
	Gustatory (taste)
	Tactile (touch)
	Involvement of the imagination

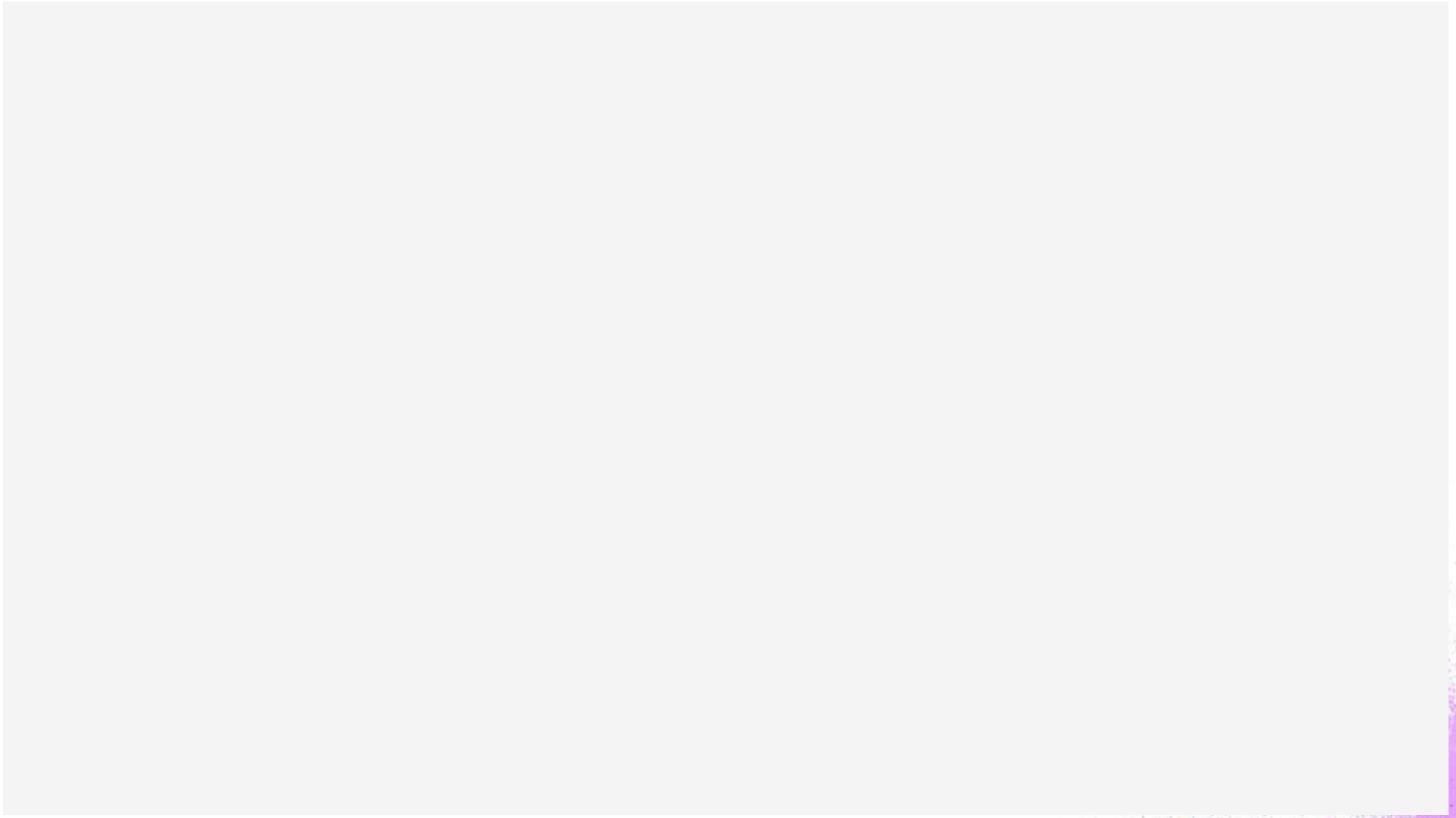
Cognitive and/or creative stimuli	Emotional stimuli
	Cognitive stimuli
	Aesthetic engagement
	Pleasure
	Participant choice
Physical motions and actions	Proprioception (kinaesthesia)
	Movement
	Physical exercises
PEOPLE	
Social composition	
Social diversity	Presence of others
	Shared attributes
	Distinct attributes
	Personal attributes
Participant experience	Activity experience
	Health experience
	Lived experience
	Relationship to others
Integrated social exchanges	Shared focus
	Shared activity
	Social exchanges
	Structured social time during activity
	Structured social time outside activity
	Communications
Informal social exchanges	Unstructured social time during activity
	Unstructured social time outside activity
Activity facilitation	
Type	Facilitator(s)
	Co-production
	Number
	Professionalisation
	Training
	Consistency
Facilitator experience	Activity experience
	Health experience
	Lived experiences
	Relationship to others
Practice and style	Technique
	Personal attributes
	Values-directed focus
	Outcomes-directed focus
	Person-centred focus

	Autonomy-directed
	Equality, diversity, and inclusion
	Safety
	Tailoring
Additional people	Presence of volunteers
	Presence of healthcare professionals
	Presence of others
CONTEXTS	
Setting	
Environment	Location
	Basic features
	Attractiveness
	Situation
	Time and day
	Access
	Privacy
Atmosphere	Comfort
	Belonging
	Familiarity
	Ambiance
	Organisation
Project set-up	
Economic resources	Participant charges
	Project funding
	Fees
	Longevity
	Environmental sustainability
Management	People
	Affiliation
	Branding
	Collaboration
	Patient and Public Involvement
Recruitment	Formal referral
	Informal referral
	Choice
	Advertising
Signposting and referral	Inter-sector signposting
	Health-sector signposting
	Social signposting
	Other-sector signposting
	Safeguarding referral

Warran, Burton & Fancourt, Wellcome Open Research, 2021

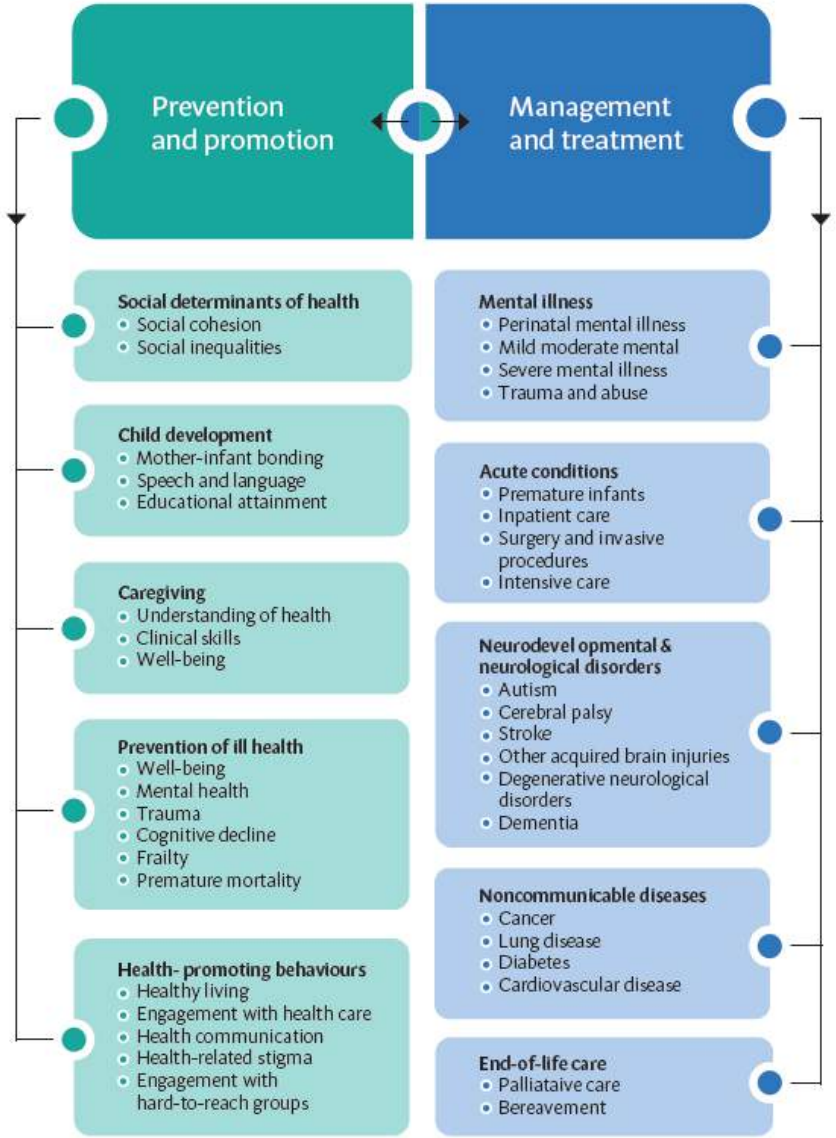
Mechanisms of Action

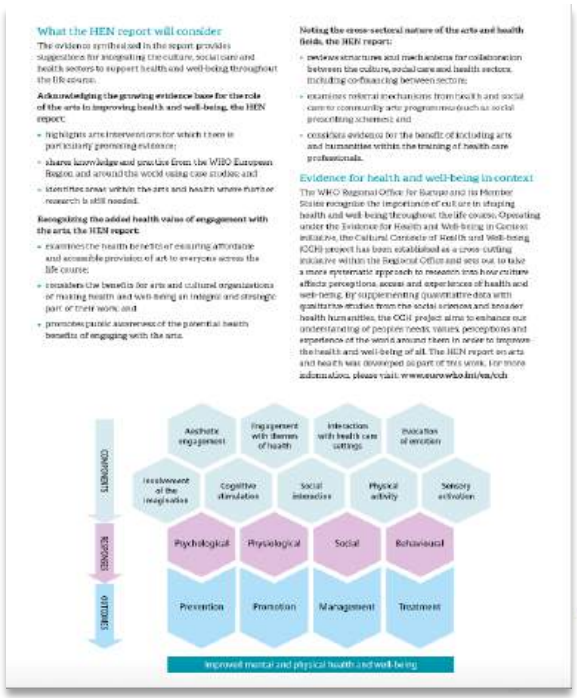
Multi-level Leisure Mechanisms Framework



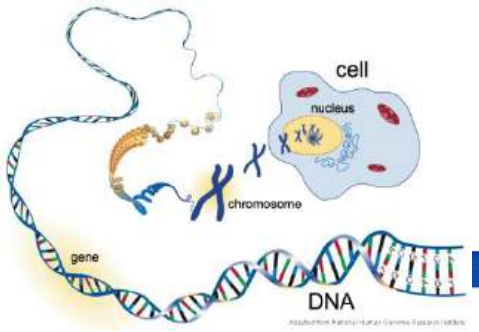
Fancourt et al. (2020) Lancet Psychiatry

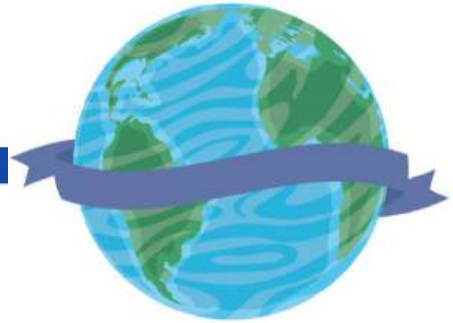
WHO Report on Arts & Health

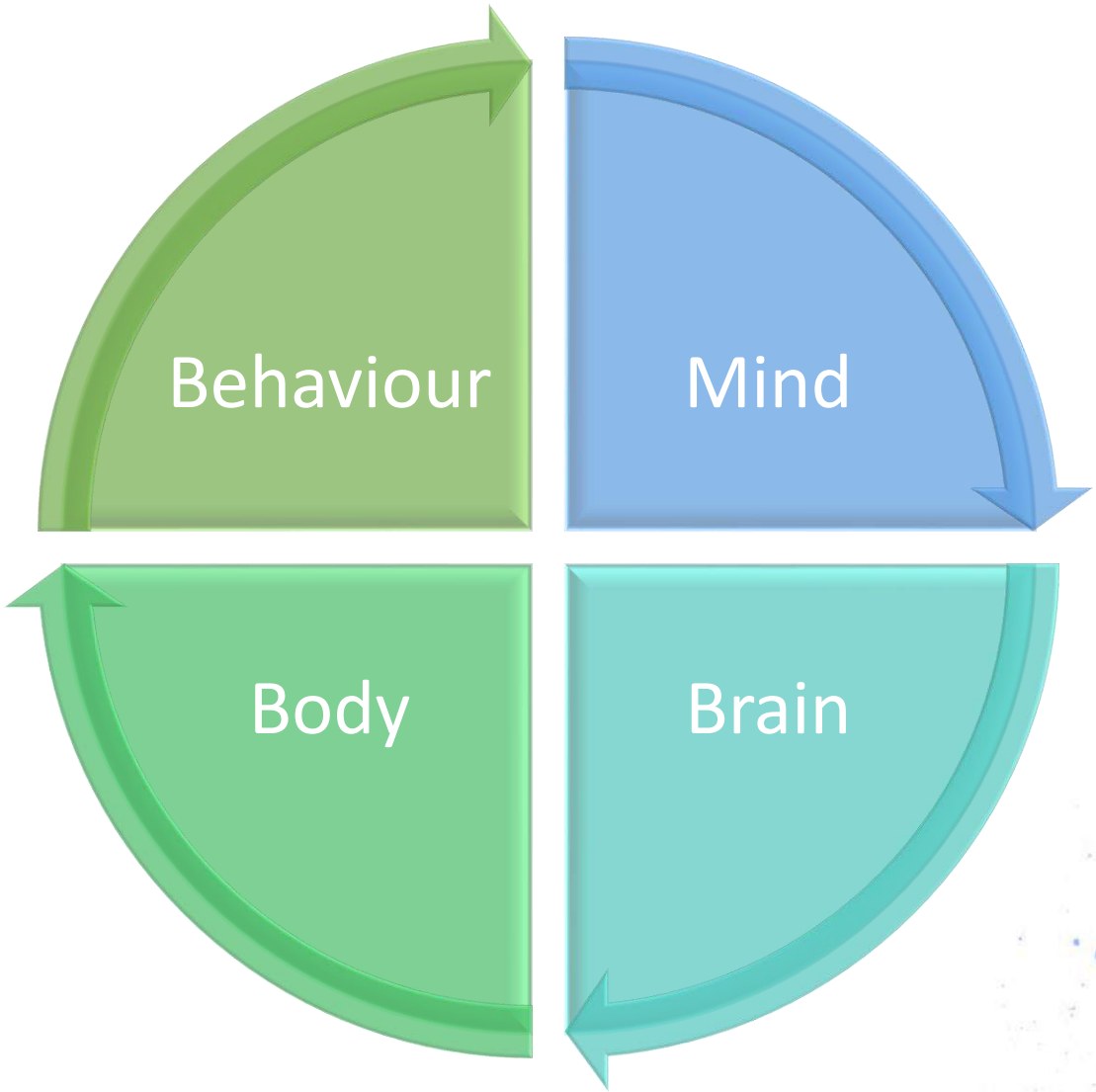




Applying a “zoom” lens



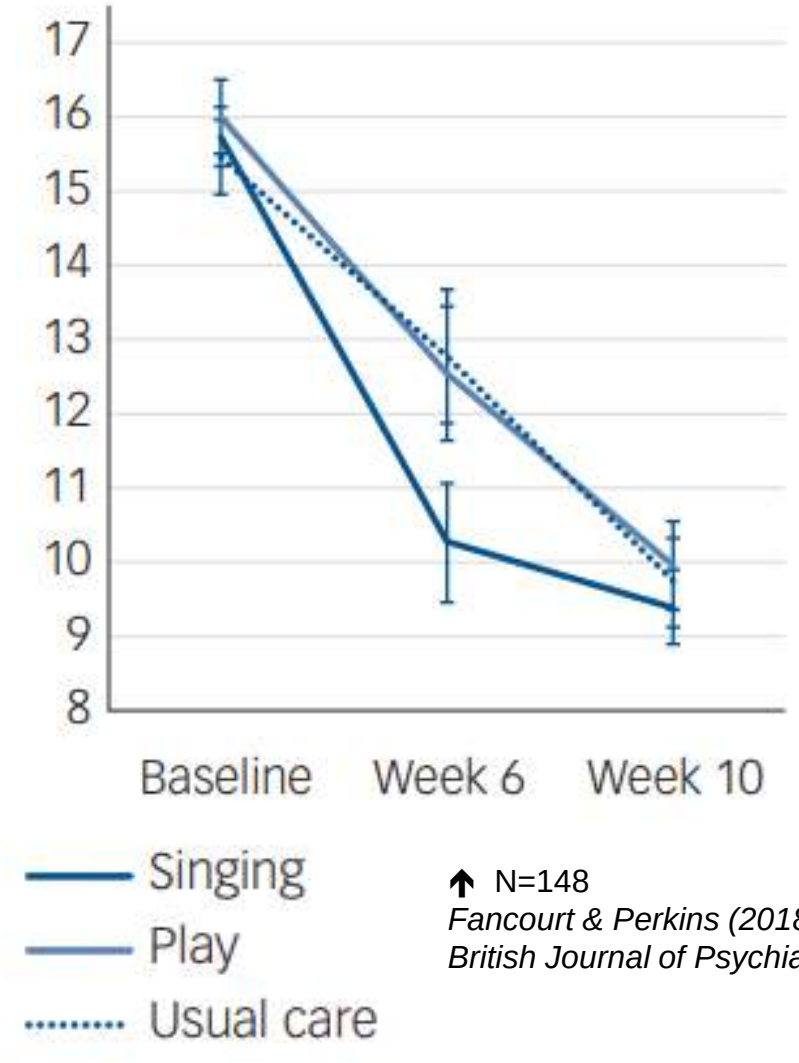



Behaviour
Mind
Body
Brain

Singing prescribing for postnatal depression in Europe

World Health Organization

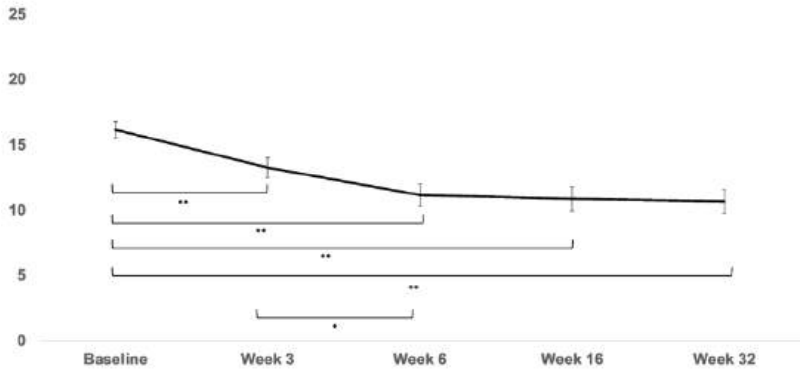
Original trial



↑ N=148
Fancourt & Perkins (2018) British Journal of Psychiatry

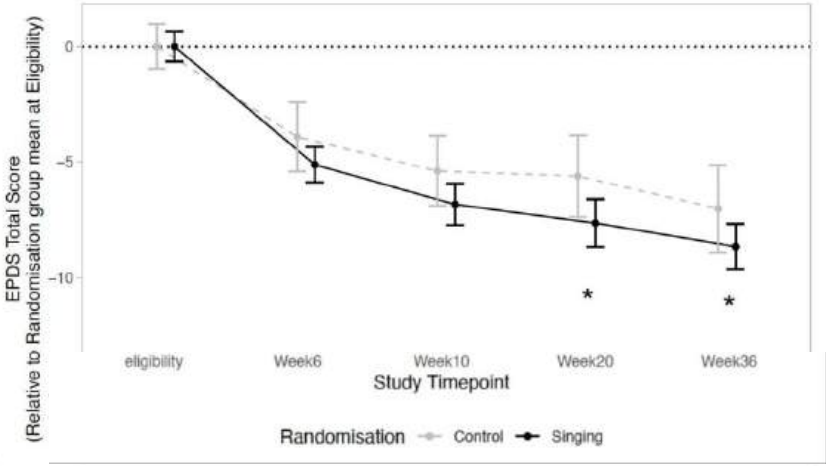
N=199 ➔
Bind et al. (in preparation)

Online replication



↑ N=37
Bind et al. (2023) Pilot Feasibility Studies

Follow-up trial



Arts prescribing for mental health in Greece

Funded by the European Union
NextGenerationEU

Greece 2.0
NATIONAL RECOVERY AND RESILIENCE PLAN

Scientific Director

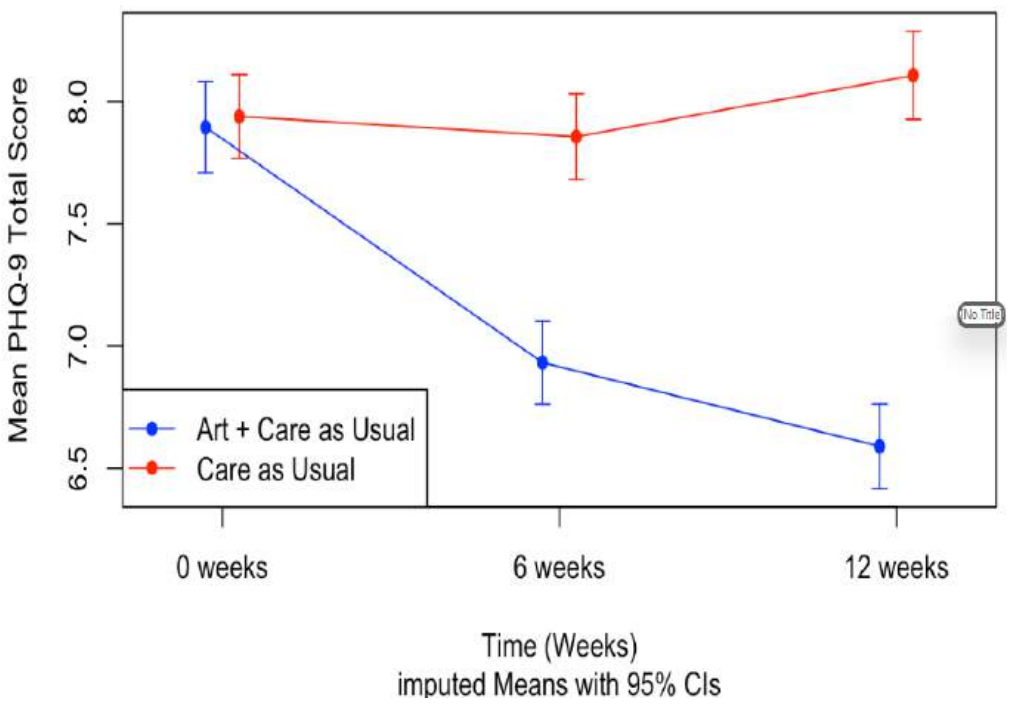
Chairman First Dep/ment of Psychiatry, National and Kapodistrian University of Athens, Vice director UMHRI

Nikos Stefanis

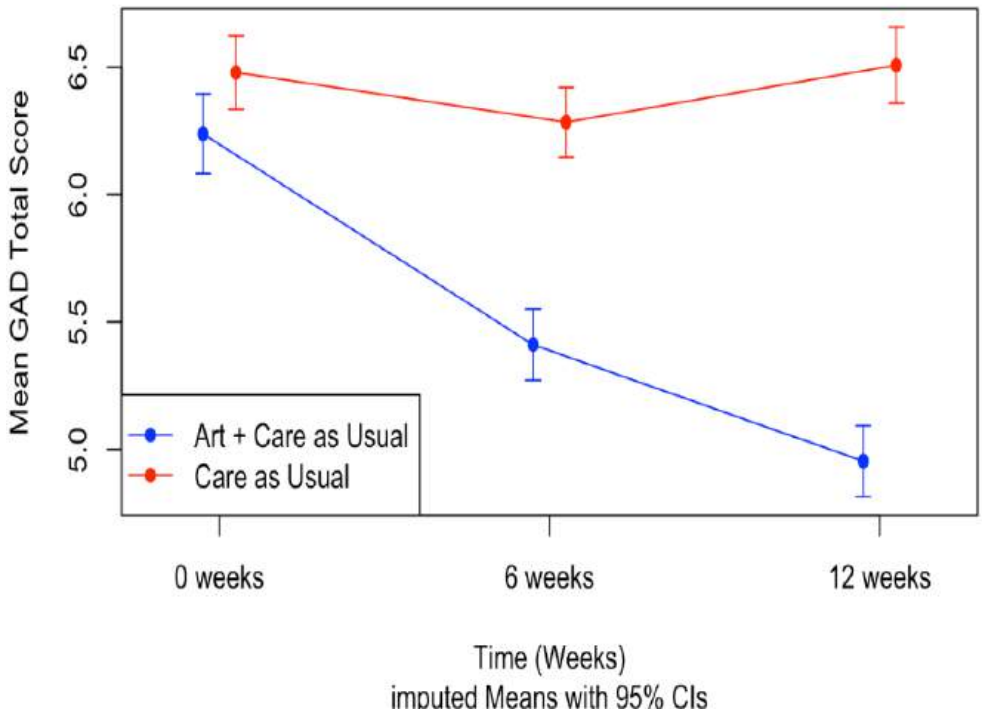
UNIVERSITY MENTAL HEALTH RESEARCH INSTITUTE

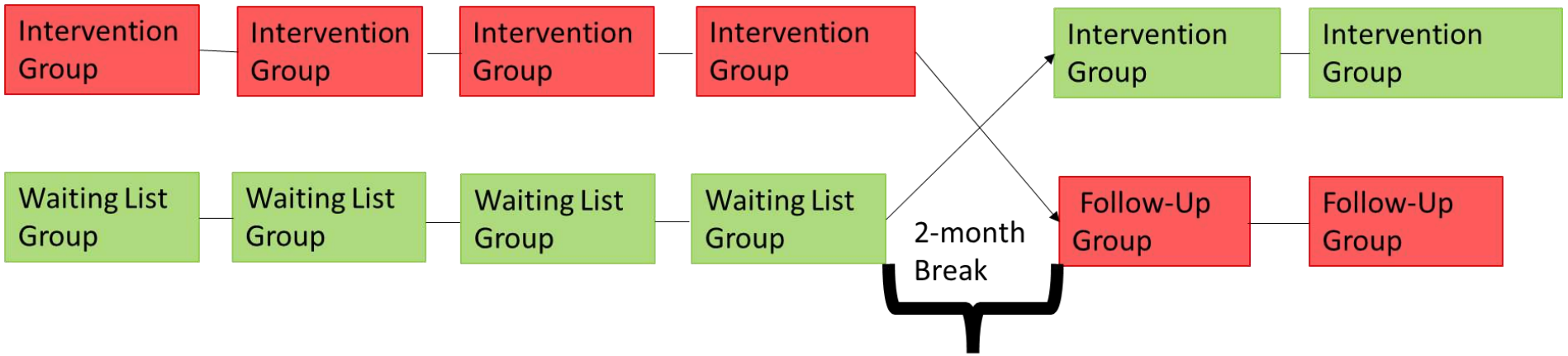
(UMHRI)

Depression



Anxiety

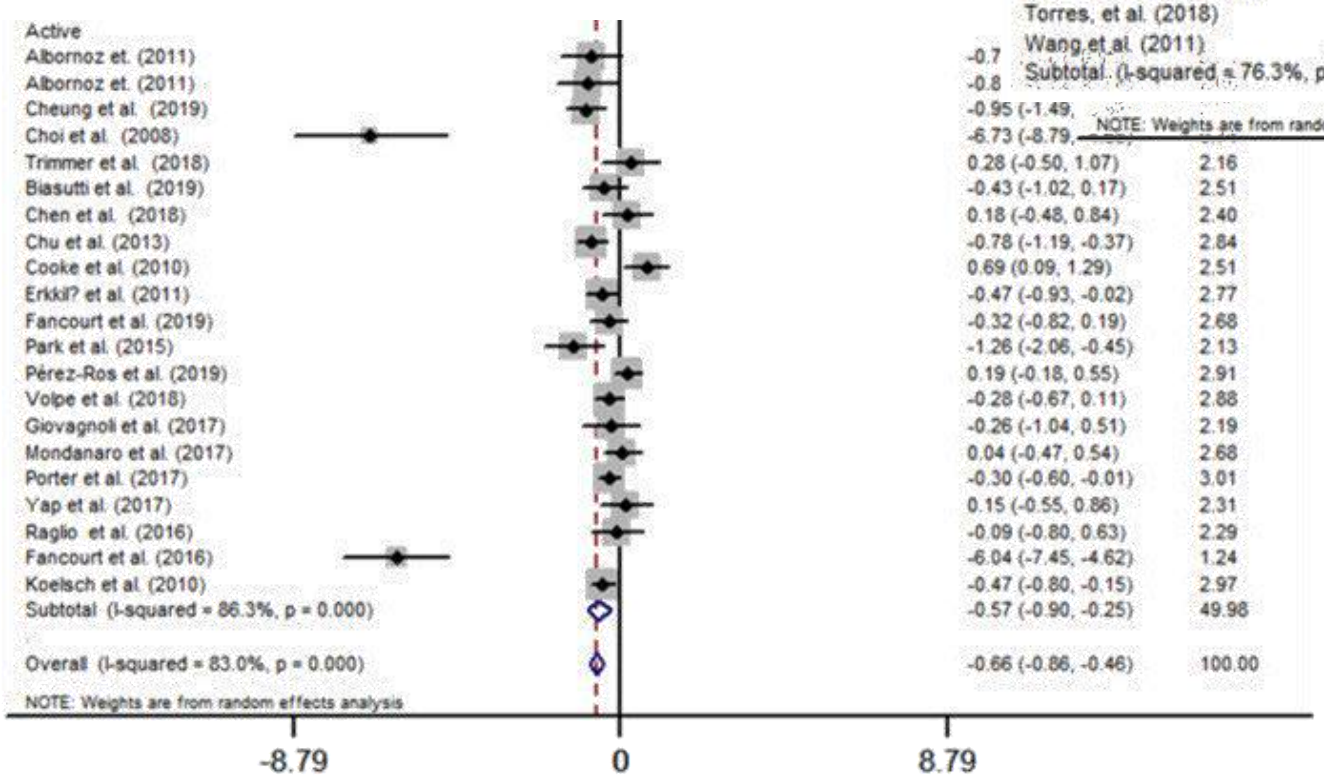


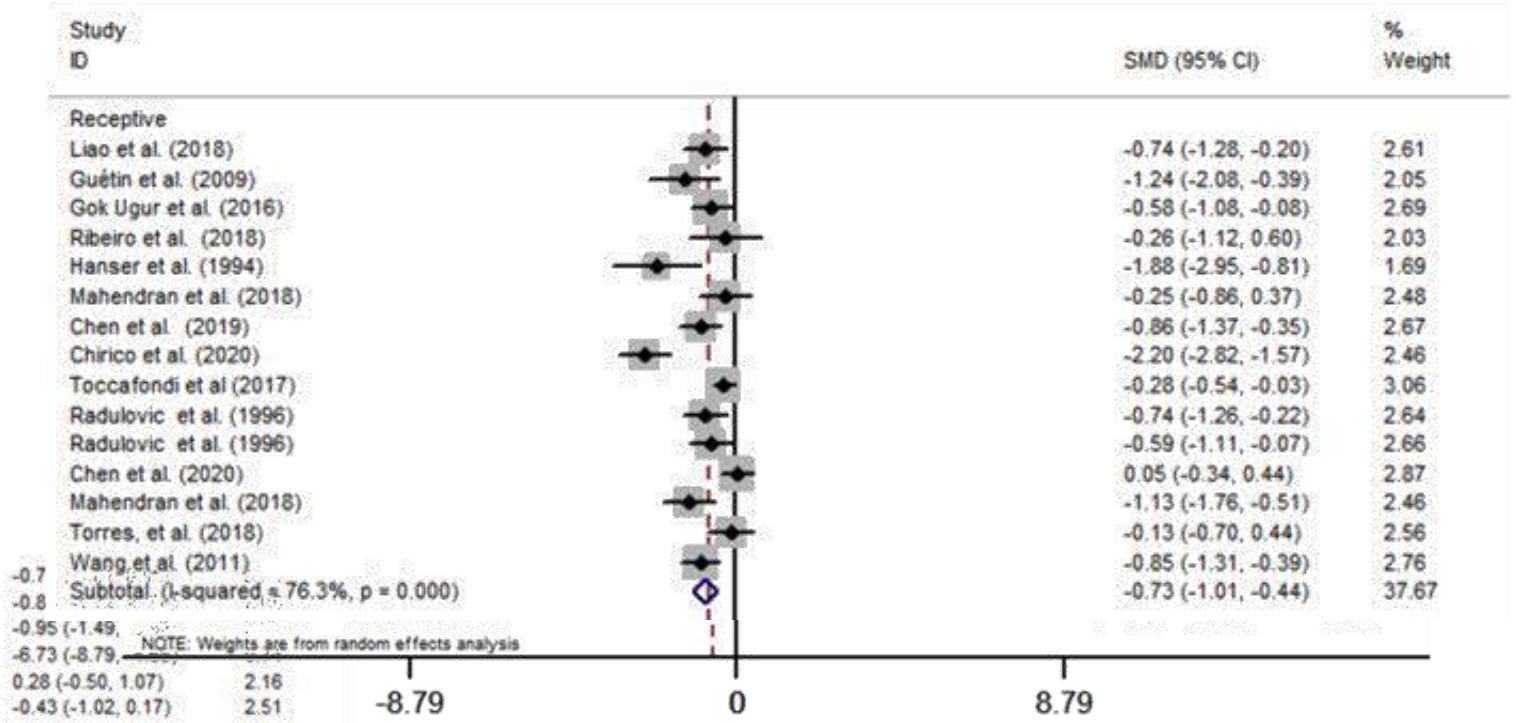


Stringaris et al. In prep

Arts & mental health

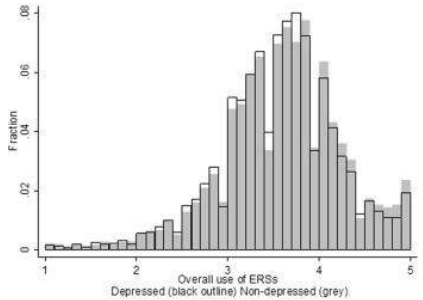
Active music interventions ↓

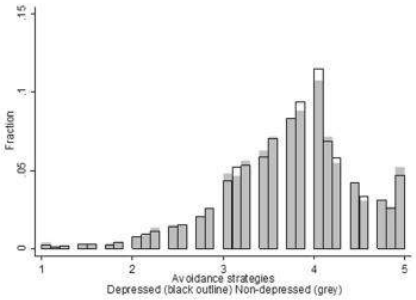


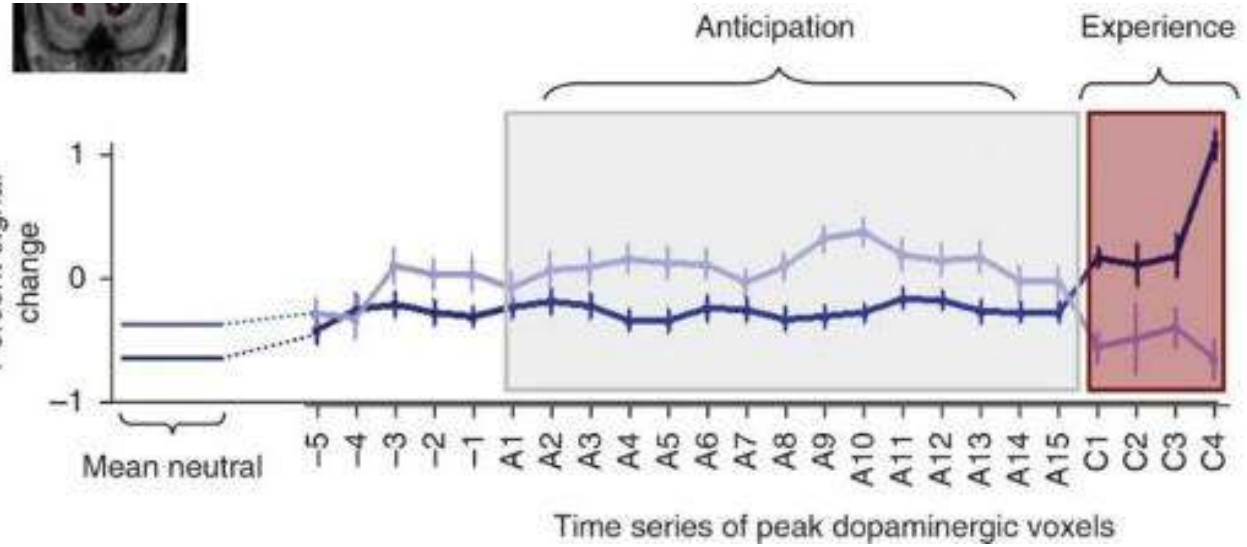


Receptive music interventions ↑

Mental health mechanisms



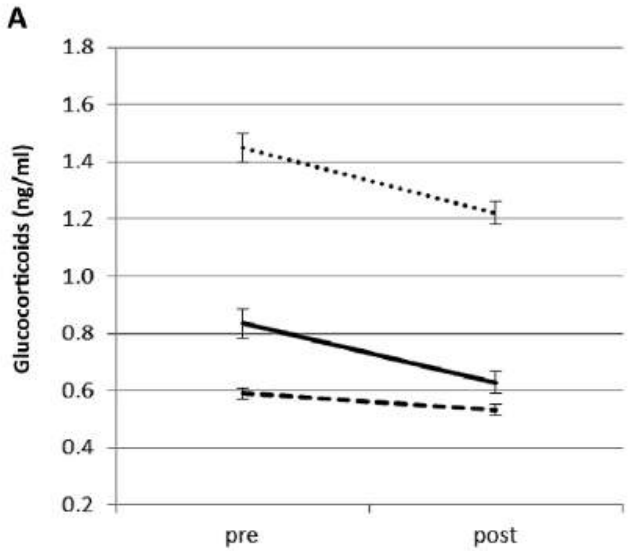


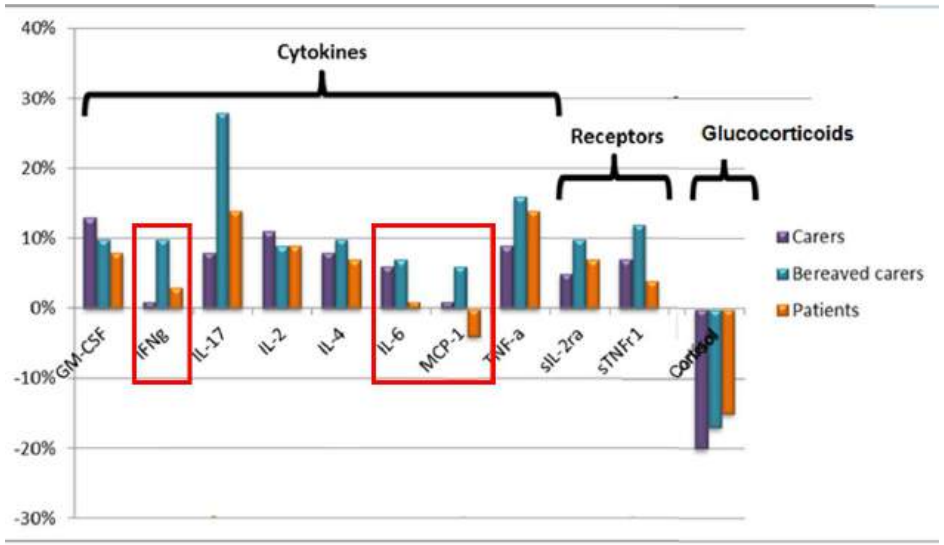


Avoidance
- Distraction
- Suppression
- Avoidance
- Detachment
- Mindfulness

Approach
- Acceptance
- Discharge
- Problem solving
- Reappraisal
- Rumination

Self development
- Sense of self
- Confidence
- Agency
- Purpose
- Self-esteem



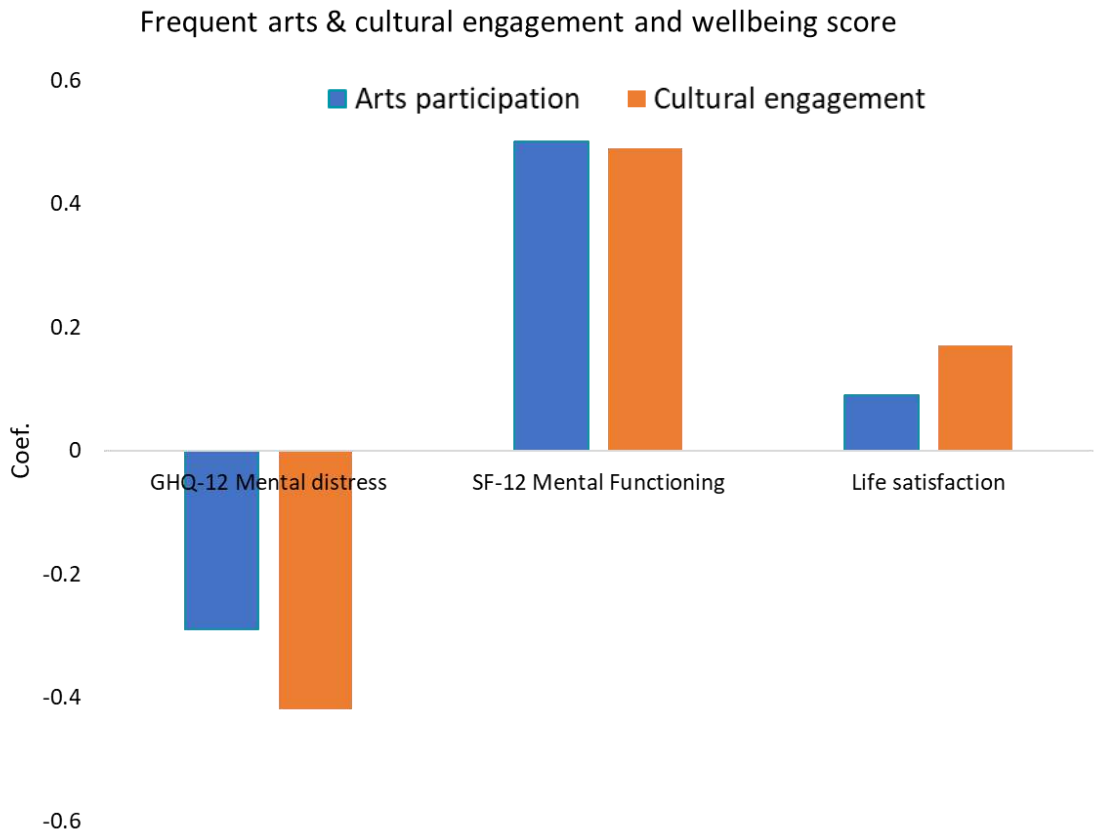


Salimpoor et al. 2011 Nat Neuro
Fancourt et al. 2016 eCancer

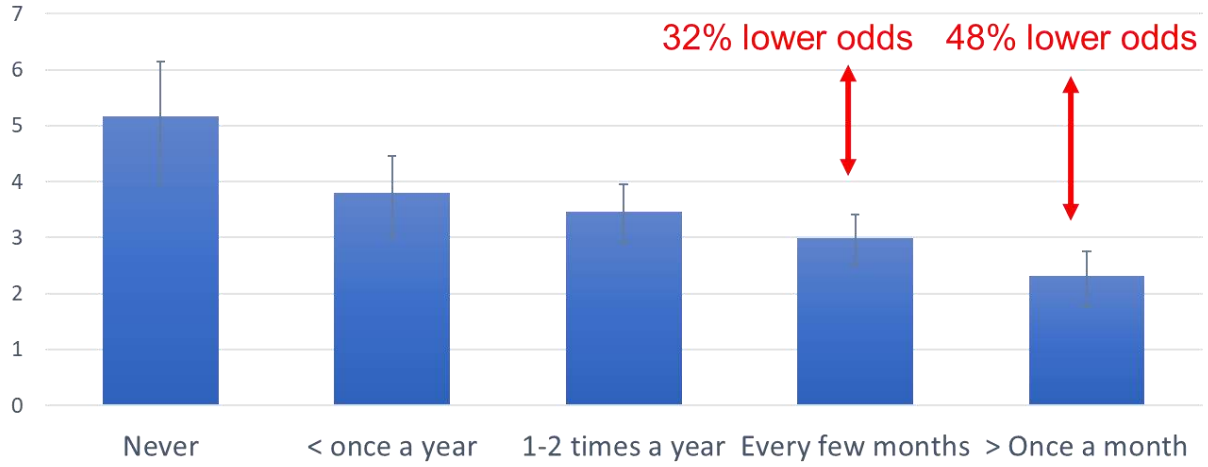
Fancourt & Williamon 2016 Public Health
Fancourt & Ali 2019 Sci Reports

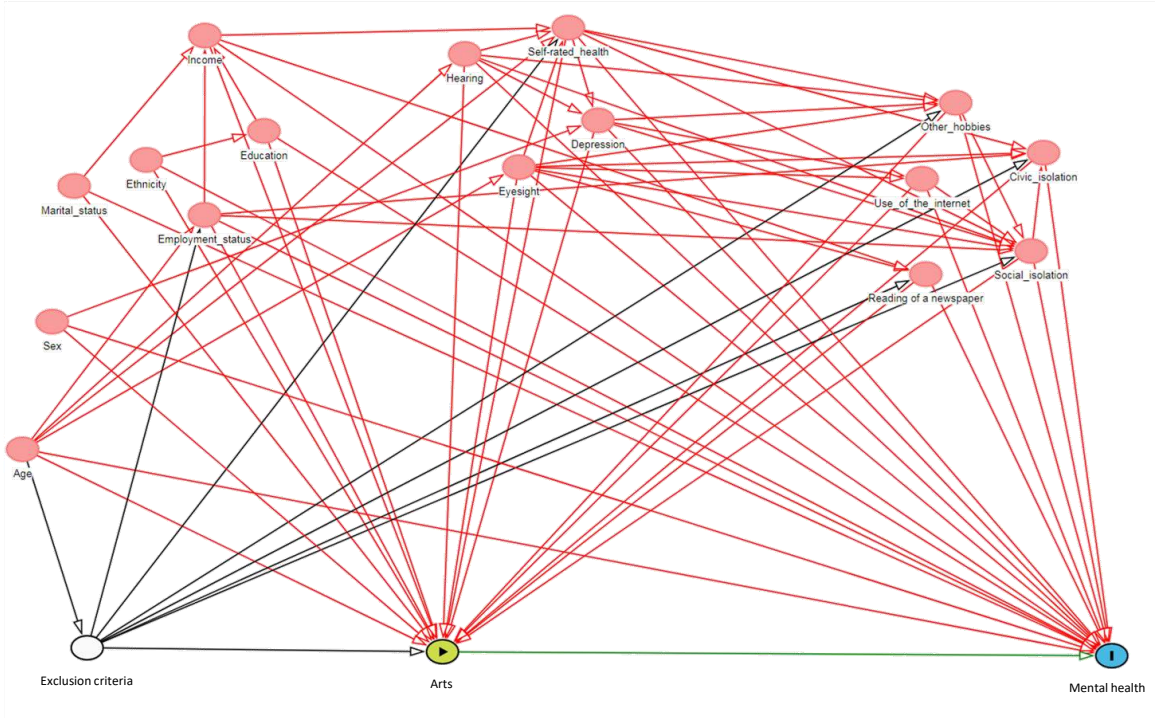
Fancourt et al. 2019 PLOS One

Prevention of mental illness



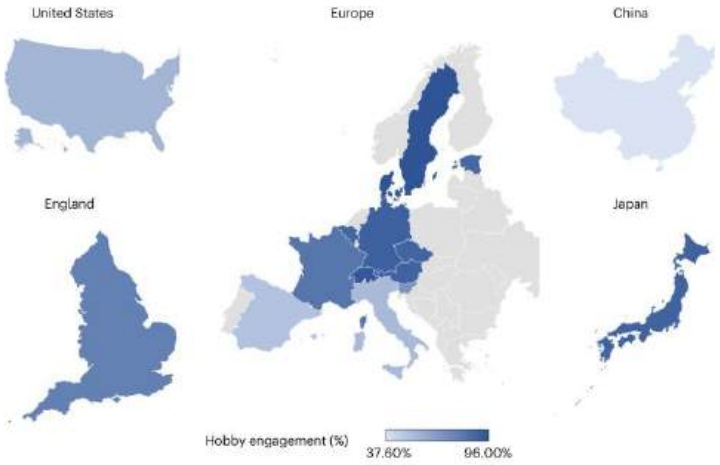
Cultural engagement:
depression incidence rates over 10 years per 100 person-years

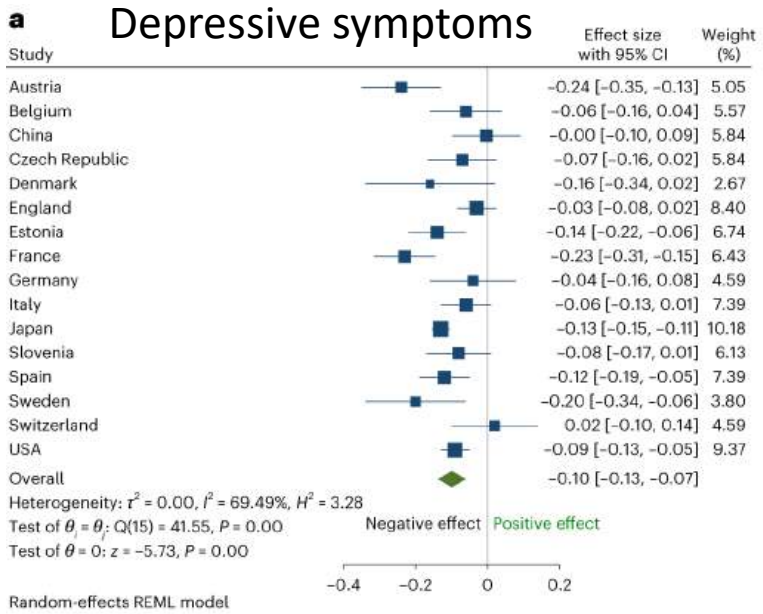


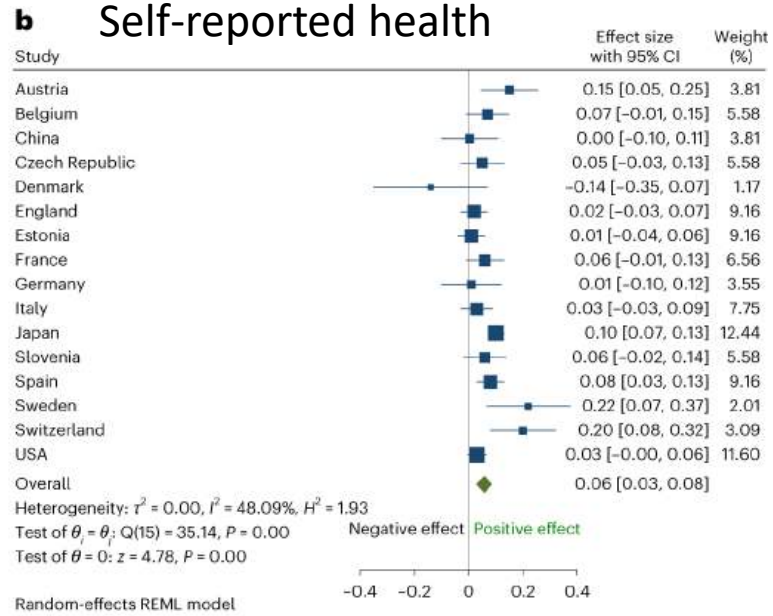


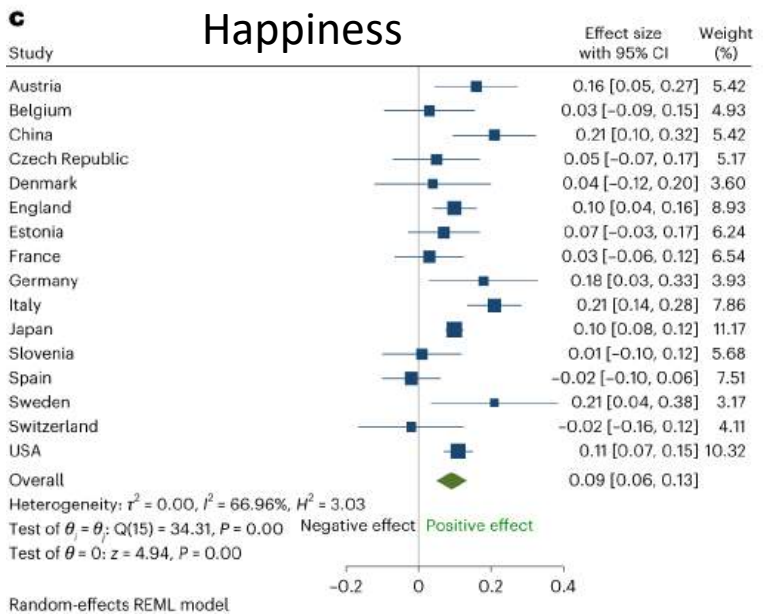
Fancourt & Tymoszuk (2019) The British Journal of Psychiatry
Wang, Mak & Fancourt (2020) BMC Public Health
Bu et al. (2020) Journals of Gerontology B

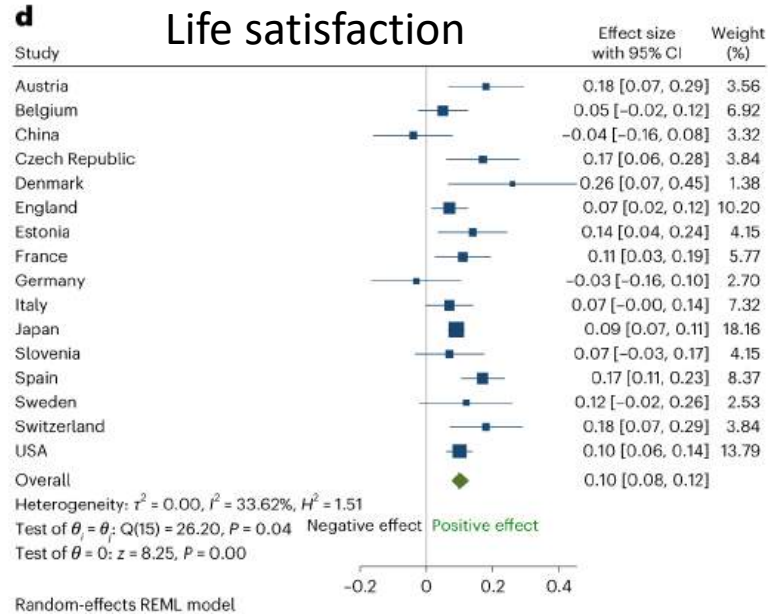
Global effects

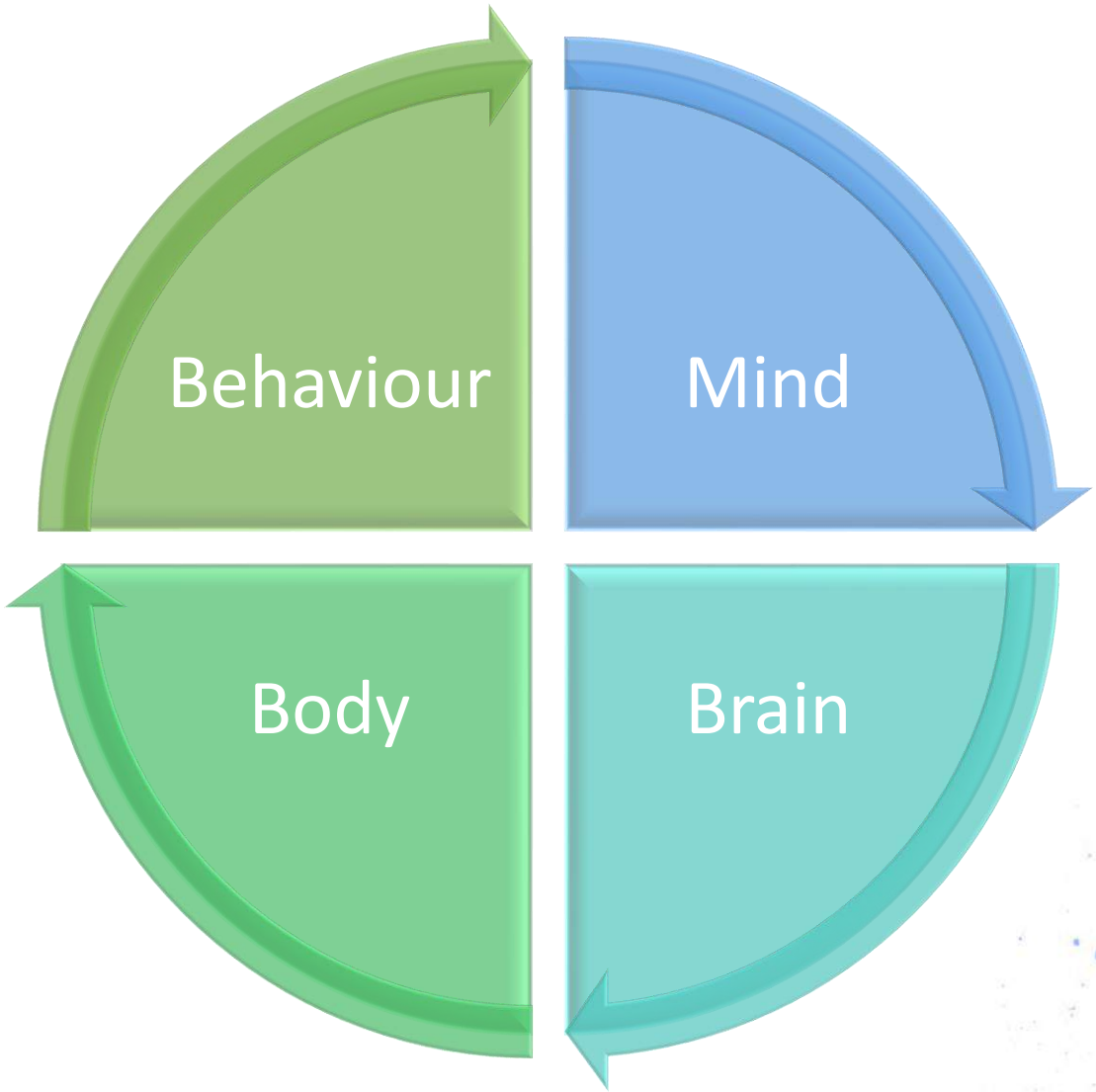




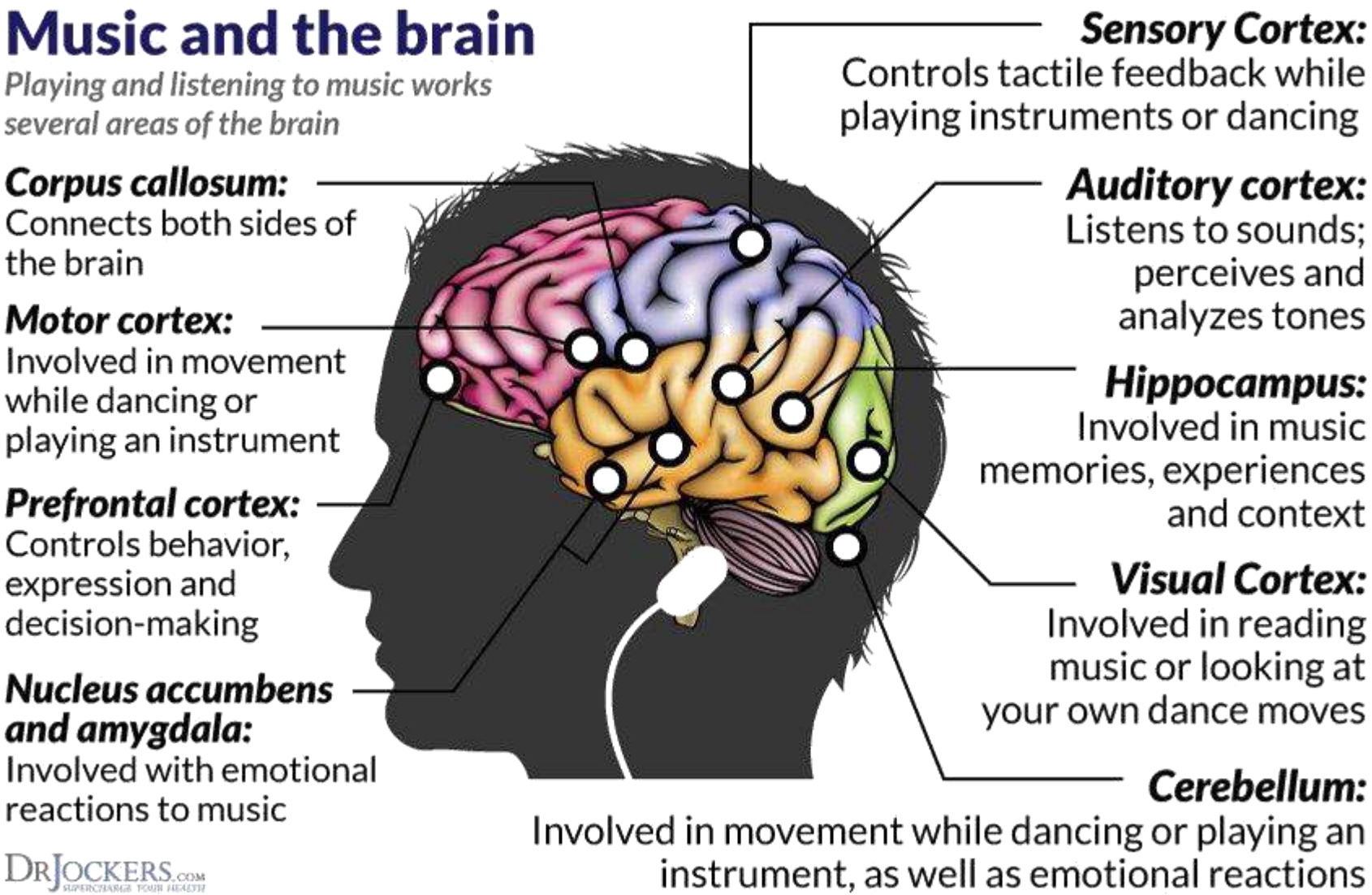




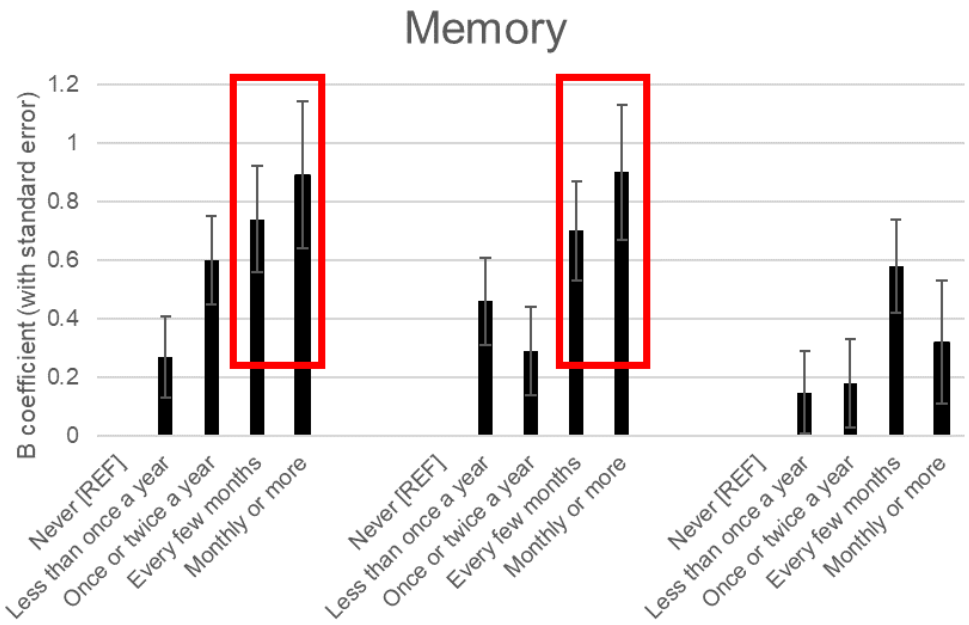


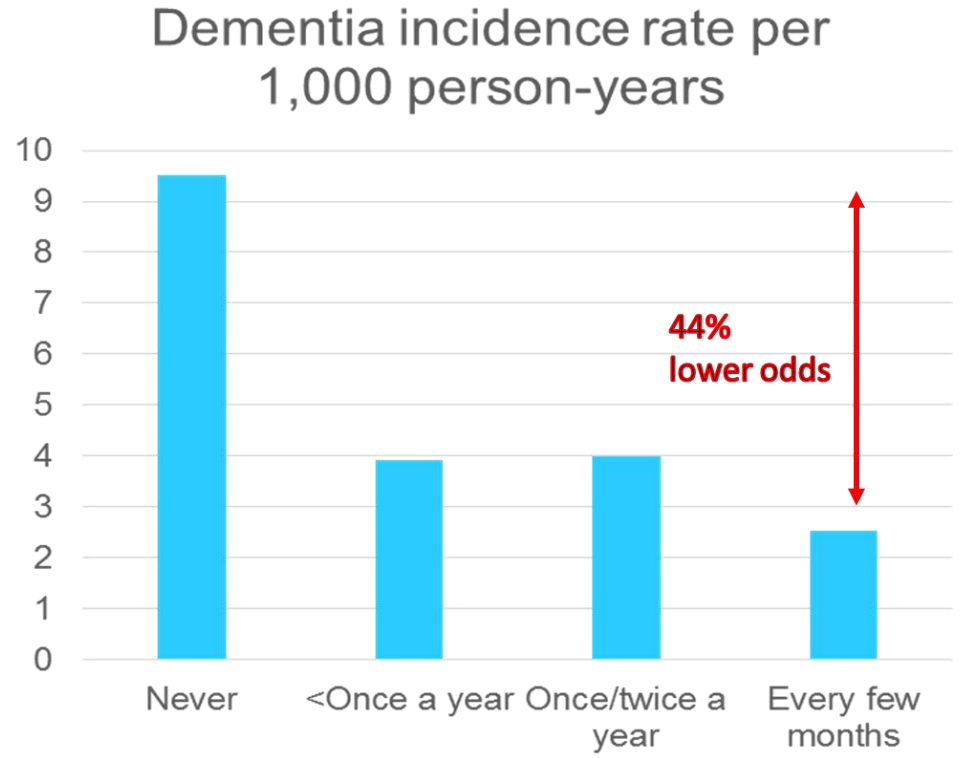

Behaviour
Mind
Body
Brain

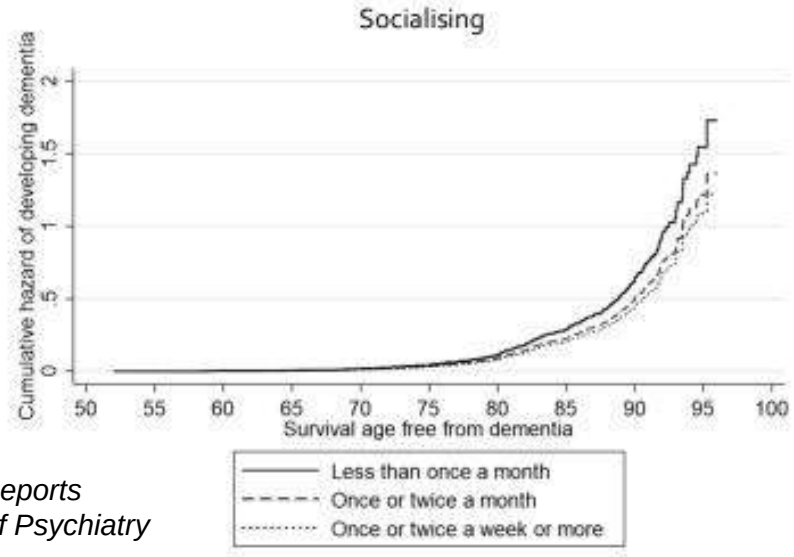
Music & cognitive development

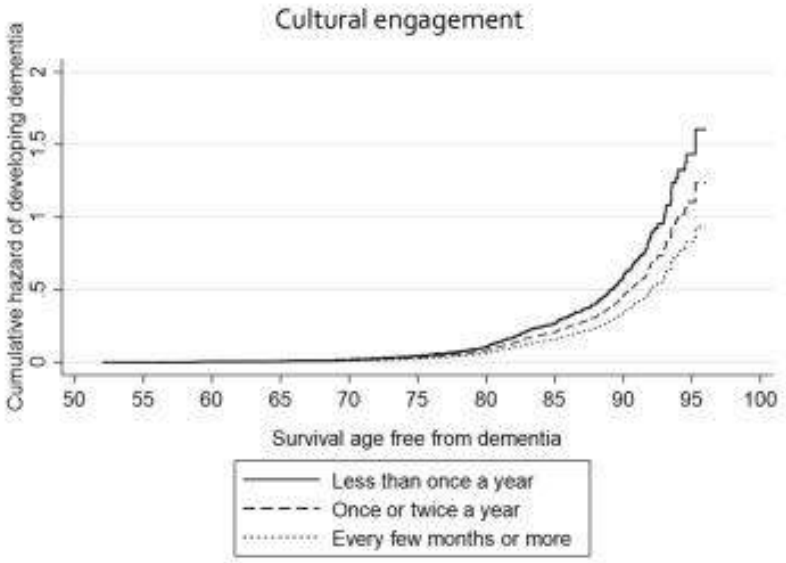


Prevention of cognitive decline



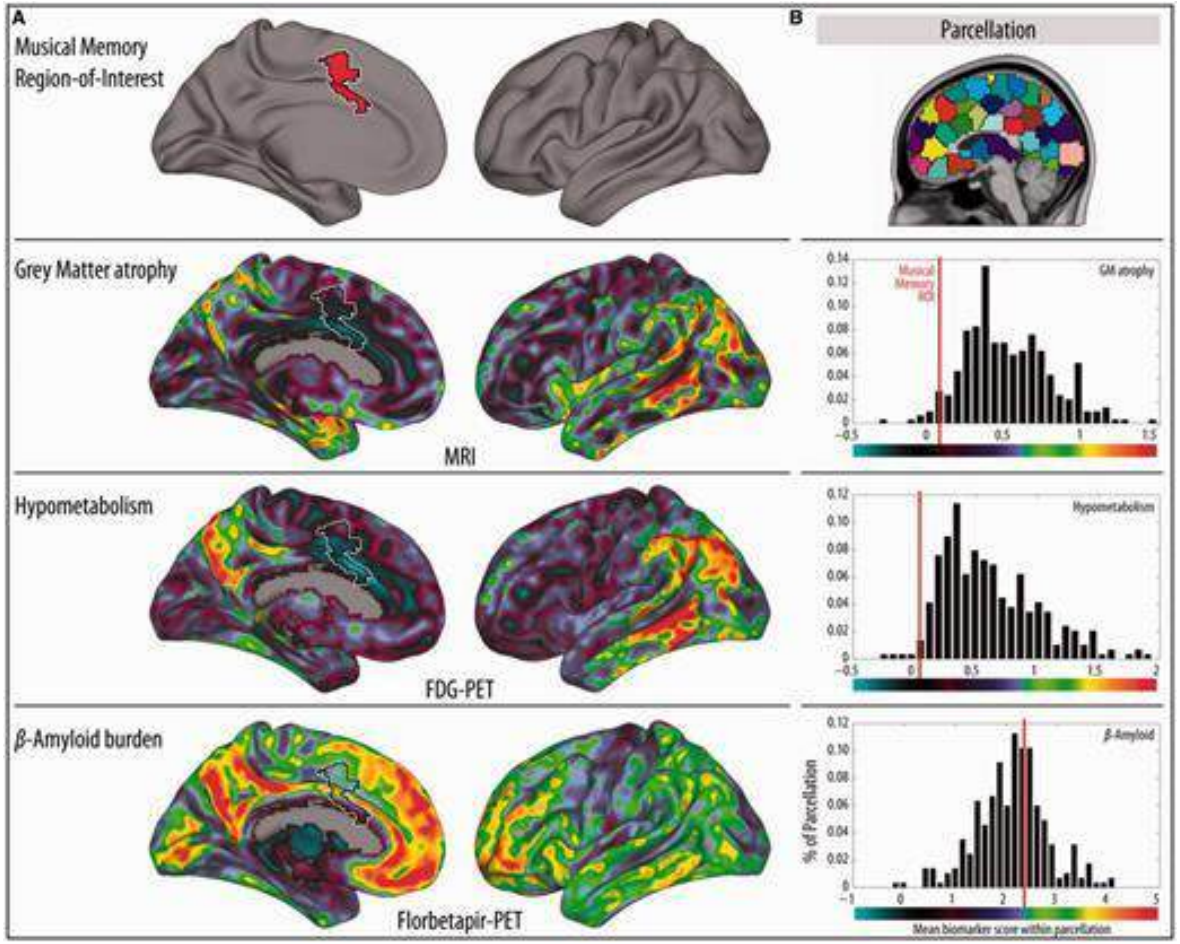


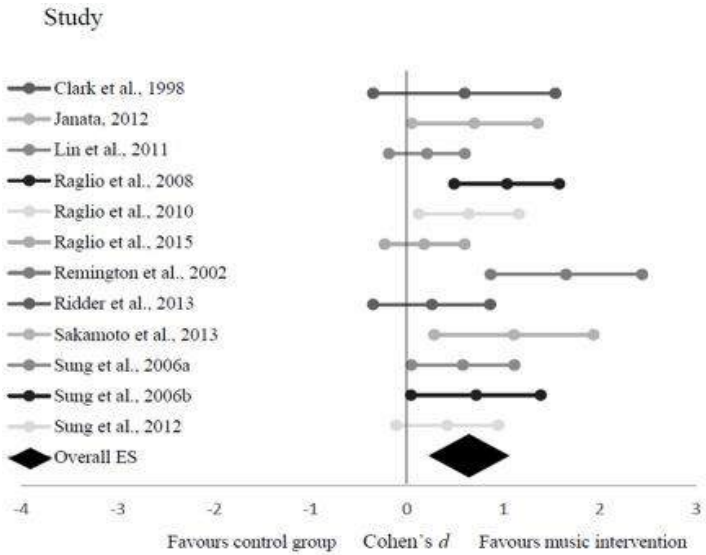




Fancourt & Steptoe (2018) Scientific Reports
Fancourt et al. (2018) British Journal of Psychiatry
Fancourt et al. (2020) JECH

Cognition in dementia





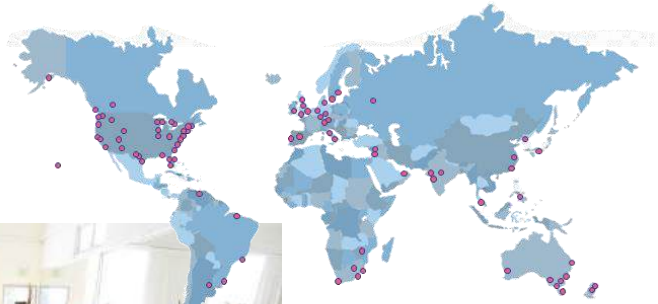
Music & behavioural agitation ↑

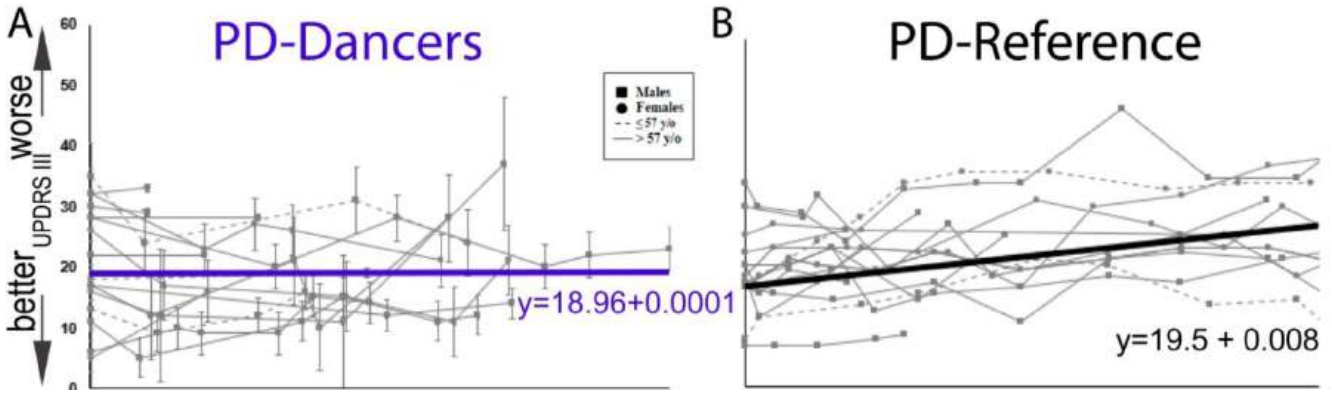
Hogeweyk

Jacobsen et al. 2015 Brain
Irish et al. 2006 Dementia

Arts & neuro-rehabilitation

DANCE FOR PD®
CLASSES | TRAINING | RESOURCES





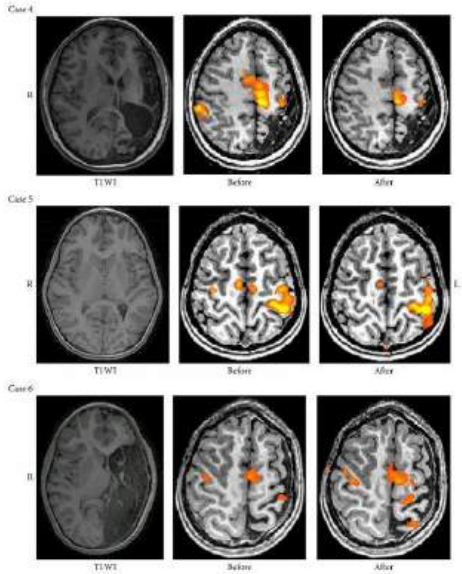
Music and gait in stroke ↓

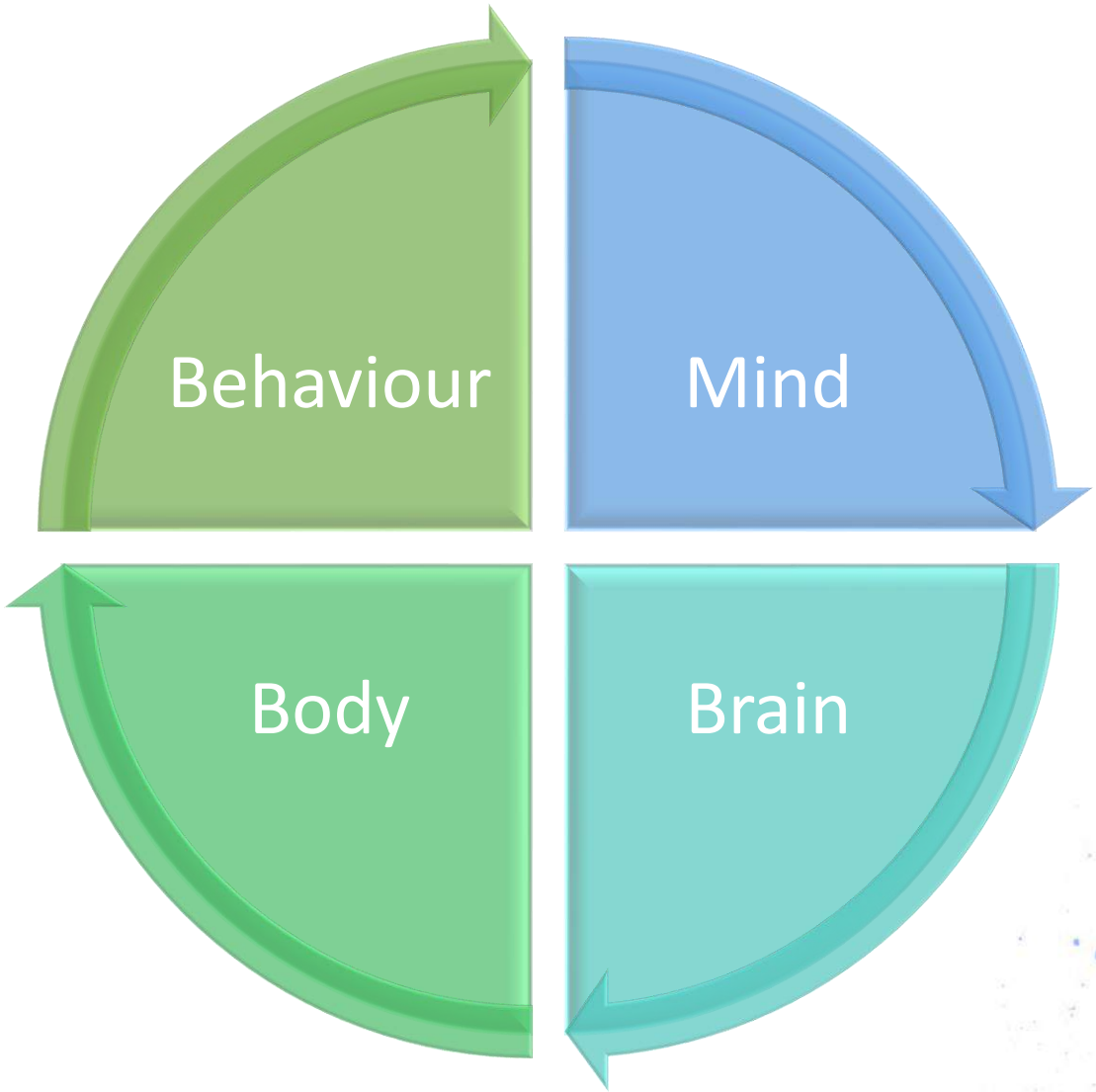
Study or subgroup	Music N	Music Mean(SD)	Control N	Control Mean(SD)	Mean Difference Random, 95% CI
Kim 2012b	10	61.8 (8.3)	10	48.3 (5)	
Lichun 2011	15	47.3 (1.2)	15	32.5 (1.5)	
Park 2010a	13	32.4 (12.6)	12	22.2 (9)	
Suh 2014	8	1.5 (2.4)	8	-1.3 (11.8)	
Thaut 1997	10	48 (18)	10	32 (10)	
Thaut 2007	43	34.5 (9.1)	35	20.3 (6.5)	
Subtotal ***	**139**		**129**		

Heterogeneity: Tau²=9.07; Chi²=20.28, df=8(P=0.01); I²=60.55%

Test for overall effect: Z=7.56(P<0.0001)

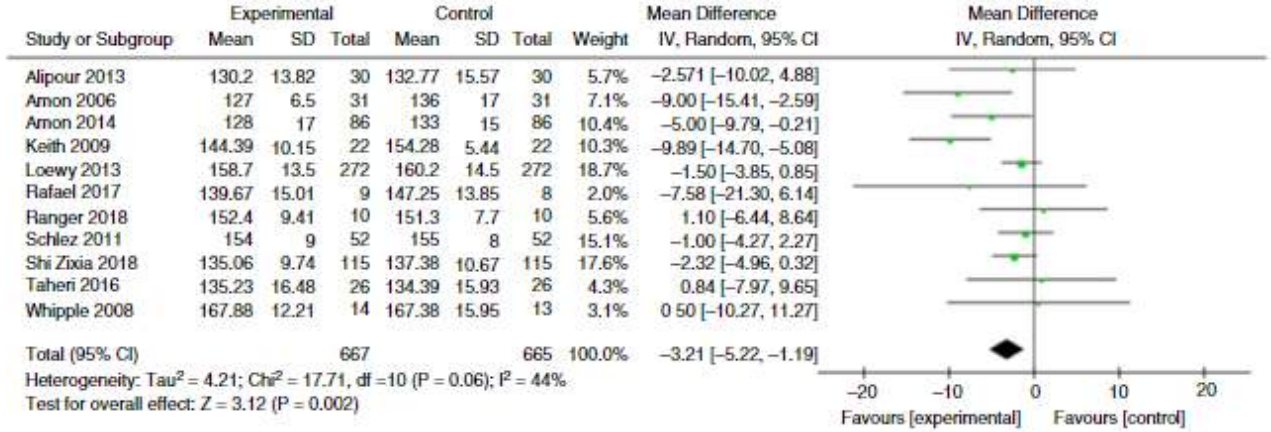
Magic for hemiplegia →

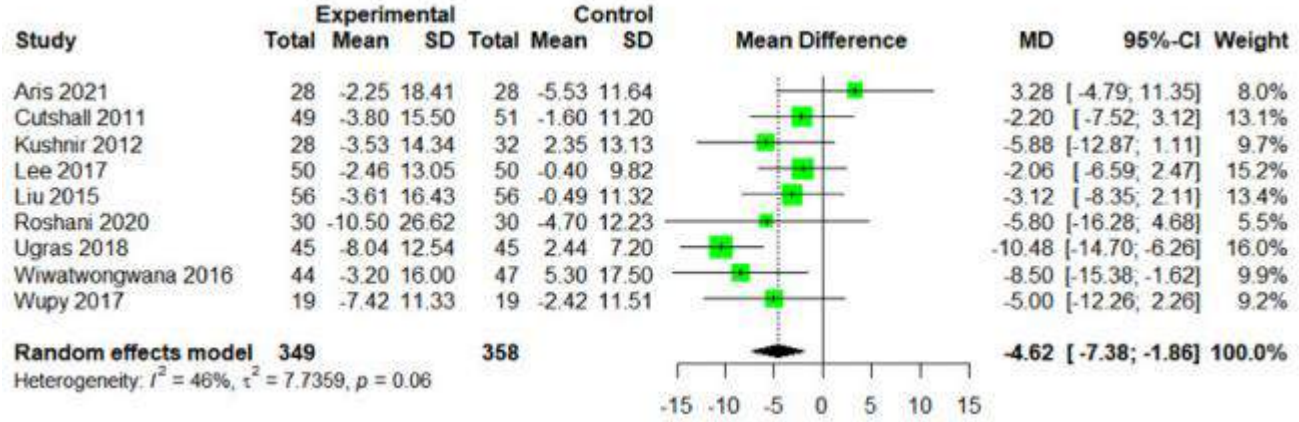



Behaviour
Mind
Body
Brain

Music for stress and pain

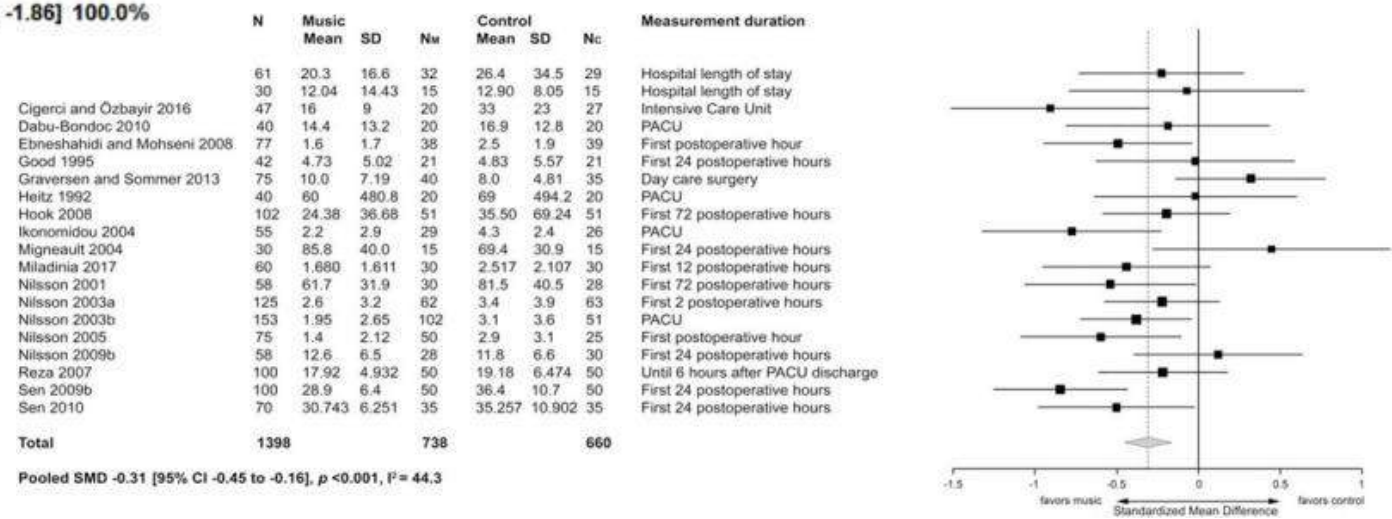
Blood pressure in adults undergoing surgery ↓





Heart rate in neonates in NICU ↑

Opioid requirements in hospital →

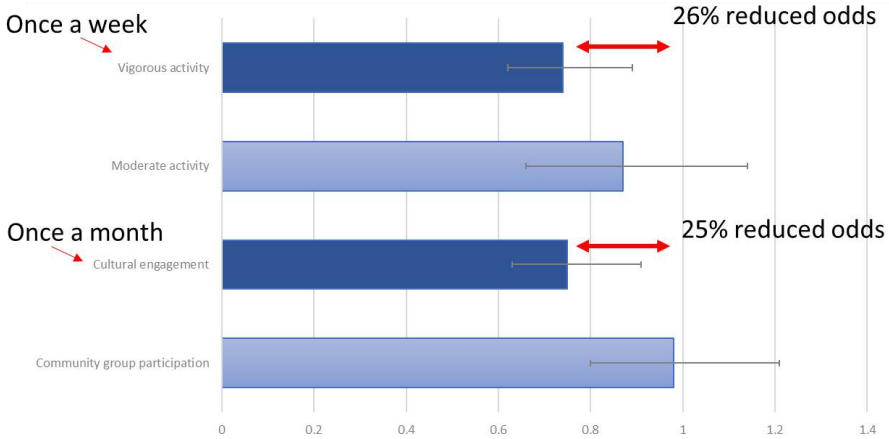


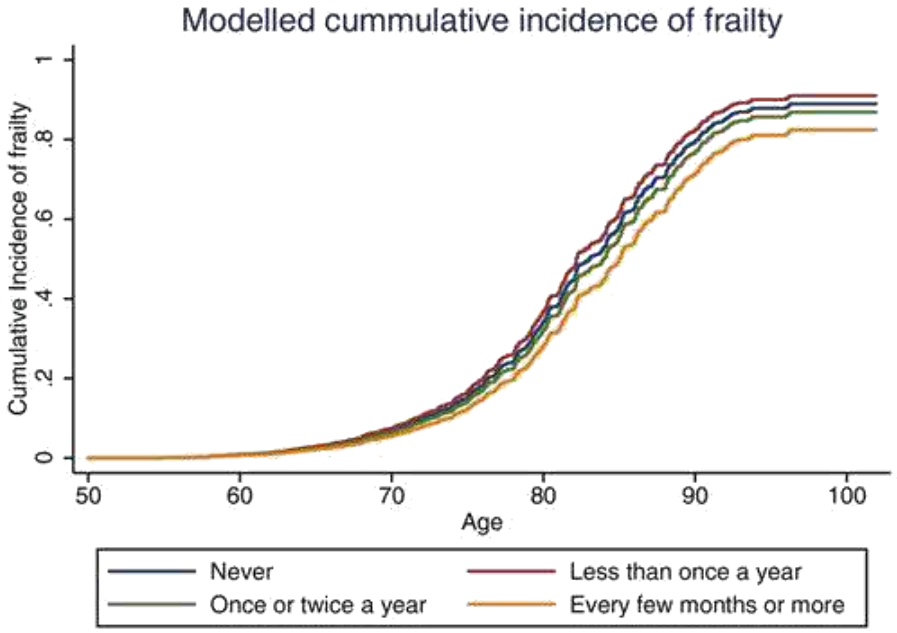
Yue et al. JAN 2020
Lee et al. 2023 As Nurs Research

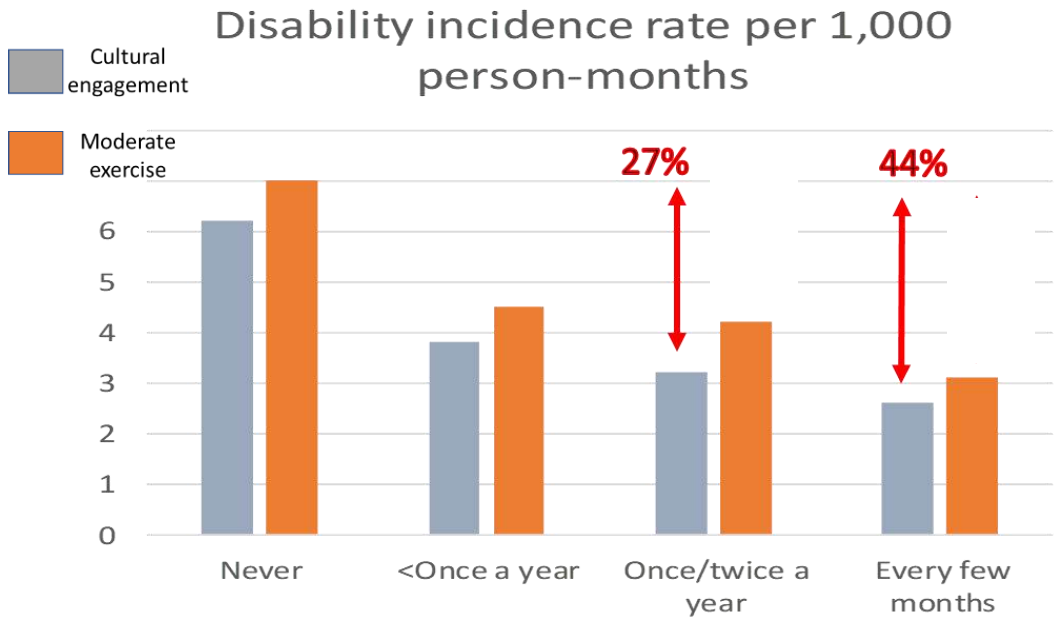
Fu et al. 2020 Ann Surg

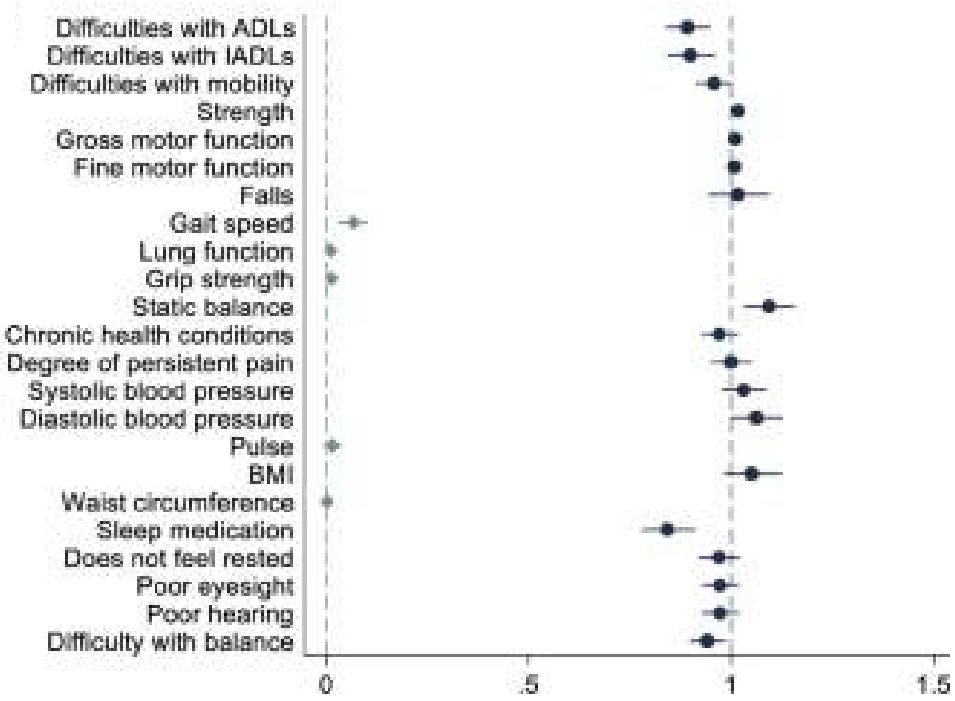
Prevention of physical decline

Cultural engagement and chronic pain



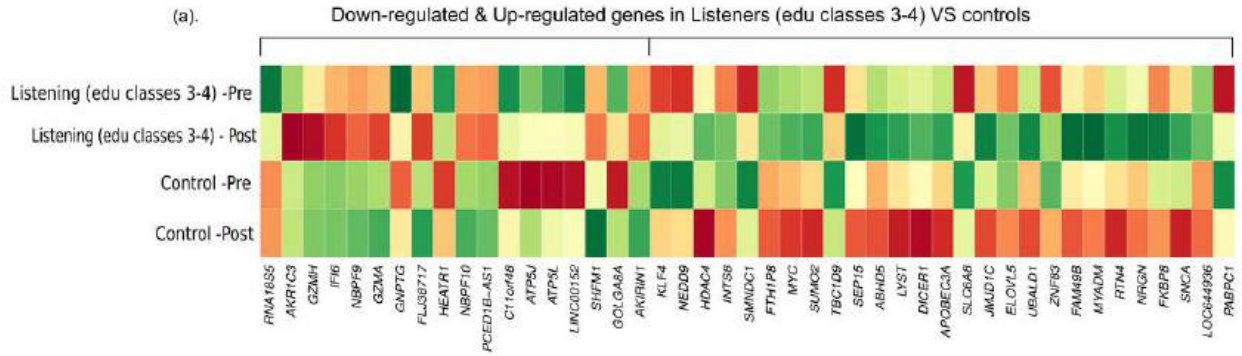


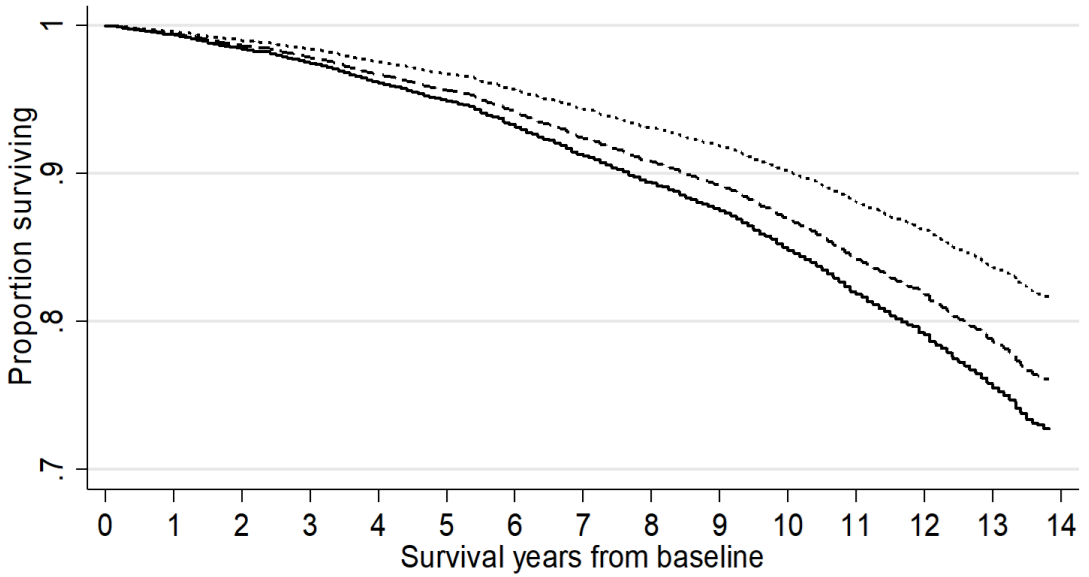




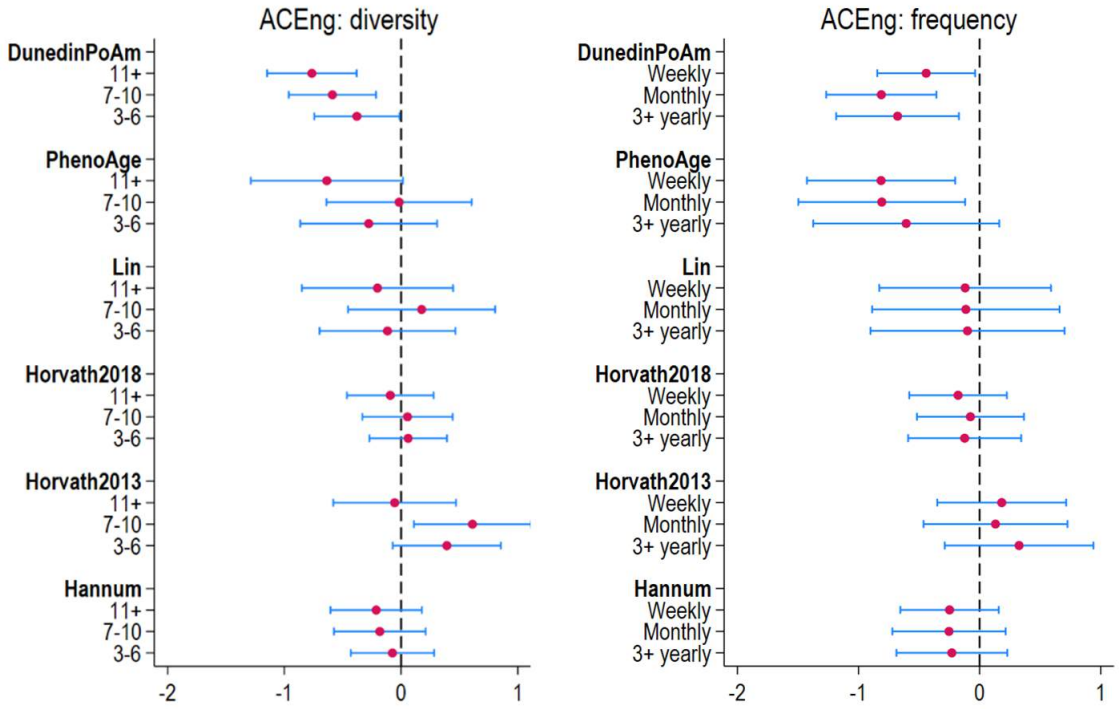
Fancourt & Steptoe (2018) The Lancet
Fancourt & Steptoe (2018) Journal of Pain
Rogers & Fancourt (2020) J Gerontol B
Bone et al. (2024) Nature Communications

Ageing & mortality





Music and gene expression ↑ Arts and epigenetic ageing ↓

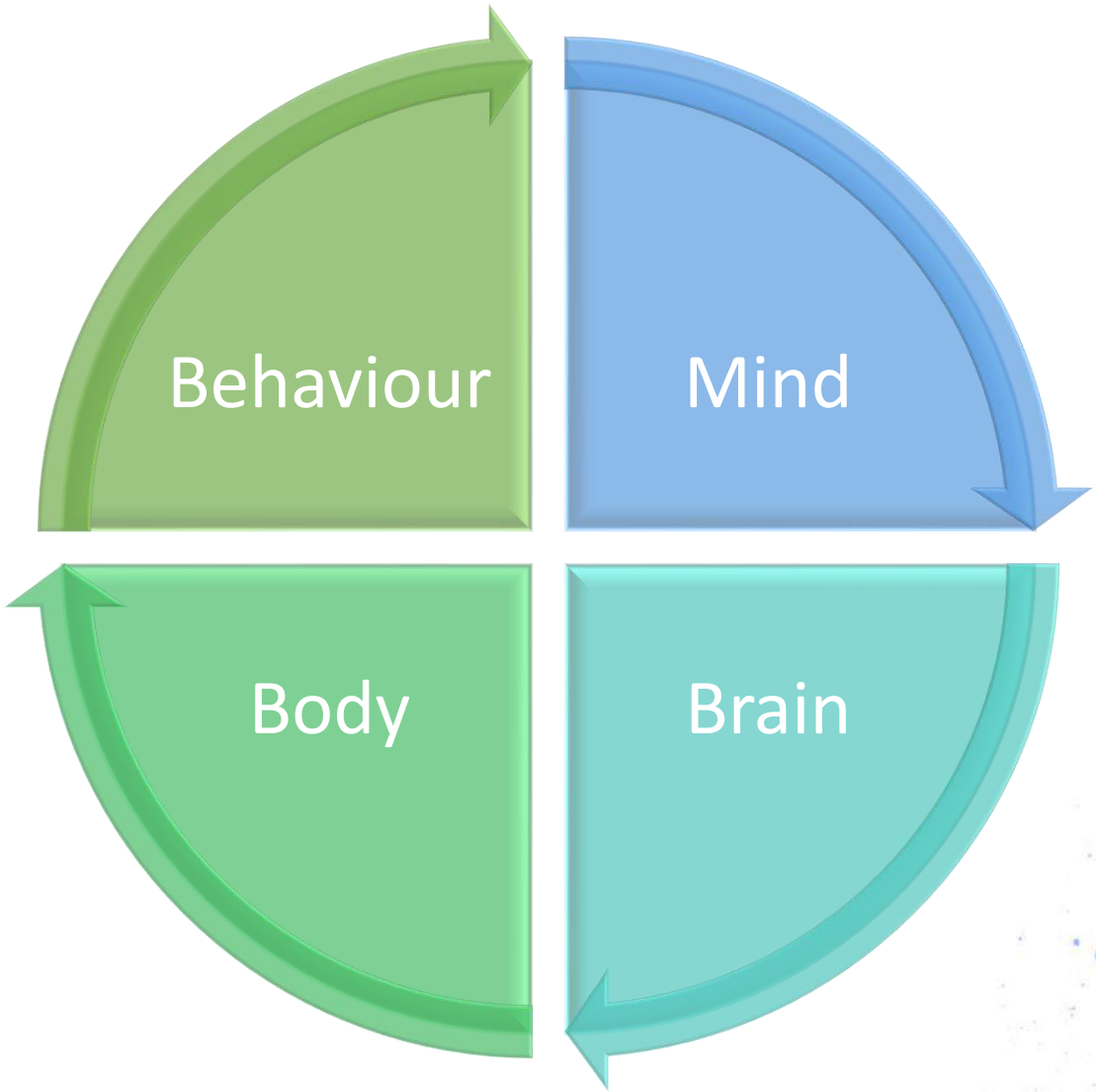


Explanatory factors	Adjusted hazard ratio (95% CI)	P	PPAE (%)
Basic model (age)	0.67 (0.63 to 0.71)	<0.001	—
+sex	0.67 (0.63 to 0.72)	<0.001	0
+education, occupational status, and employment status	0.67 (0.63 to 0.72)	<0.001	0
+wealth	0.70 (0.65 to 0.75)	<0.001	9.1
+cancer, lung disease, cardiovascular disease, or other long term condition	0.67 (0.62 to 0.71)	<0.001	0
+mobility and disability	0.71 (0.66 to 0.75)	<0.001	12.1
+depressive symptoms and psychiatric conditions	0.68 (0.64 to 0.72)	<0.001	3.0
+cognition	0.72 (0.67 to 0.76)	<0.001	15.2
+sensory impairment (hearing and eyesight)	0.67 (0.63 to 0.72)	<0.001	0
+sedentary behaviours	0.69 (0.65 to 0.74)	<0.001	6.1
+other health behaviours (drinking and smoking)	0.70 (0.65 to 0.74)	<0.001	9.1
+loneliness, living status, and marital status	0.69 (0.64 to 0.73)	<0.001	6.1
+social, civic, and hobby engagement	0.71 (0.67 to 0.76)	<0.001	12.1
=all	0.80 (0.75 to 0.87)	<0.001	41.9

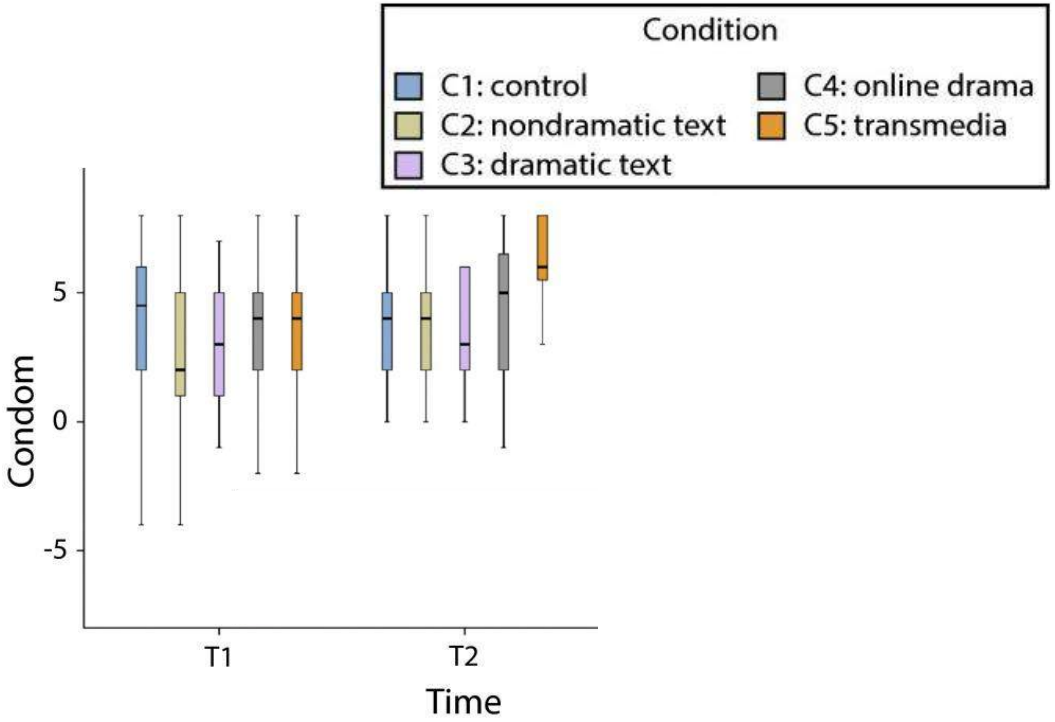
Bu et al. 2024 J Gerontol Series B
Fancourt & Steptoe 2019 BMJ

Bu et al. In Prep
Kanduri et al. 2015 PeerJ

UCL


Behaviour
Mind
Body
Brain

Arts in public health comms

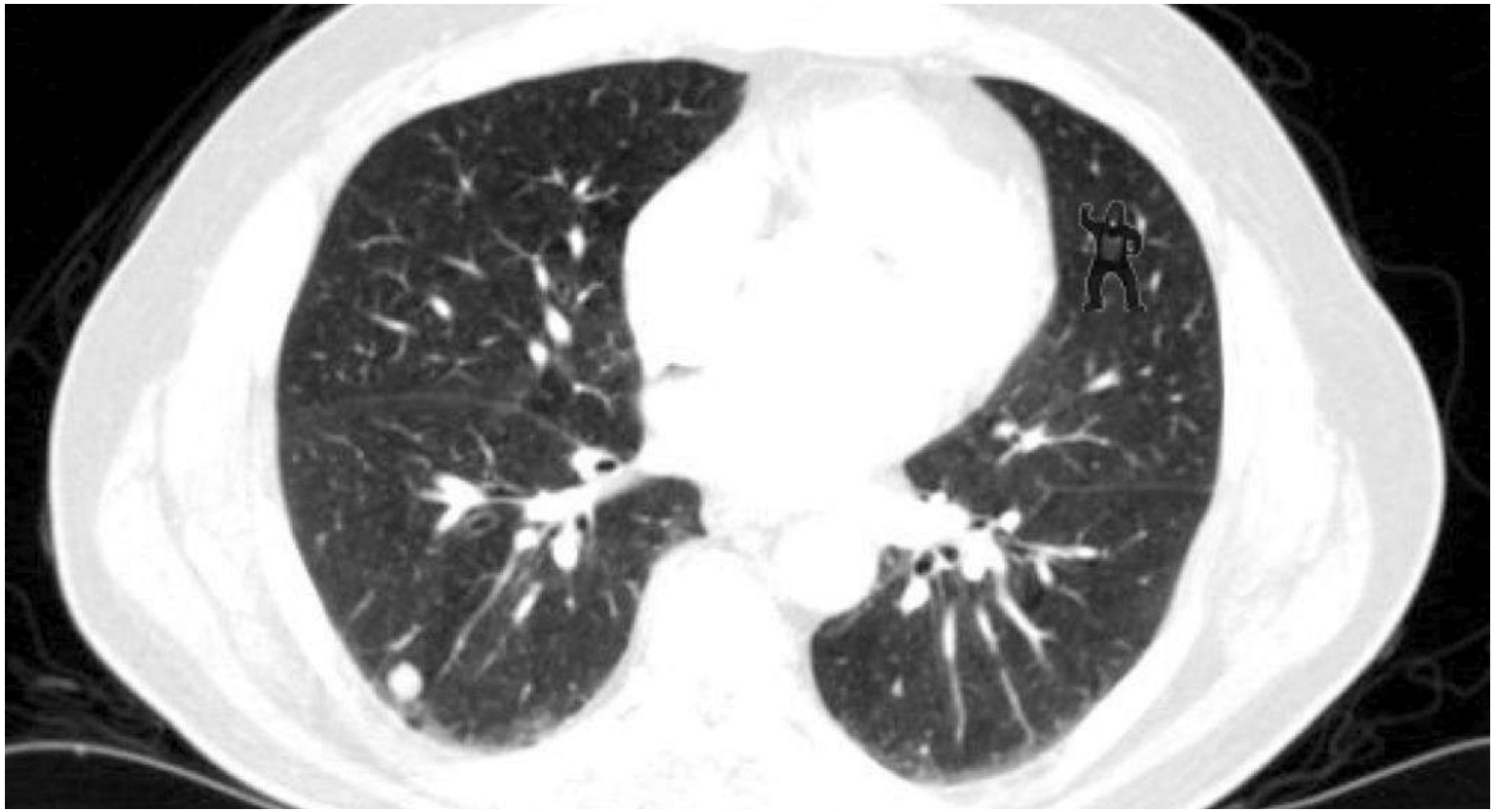


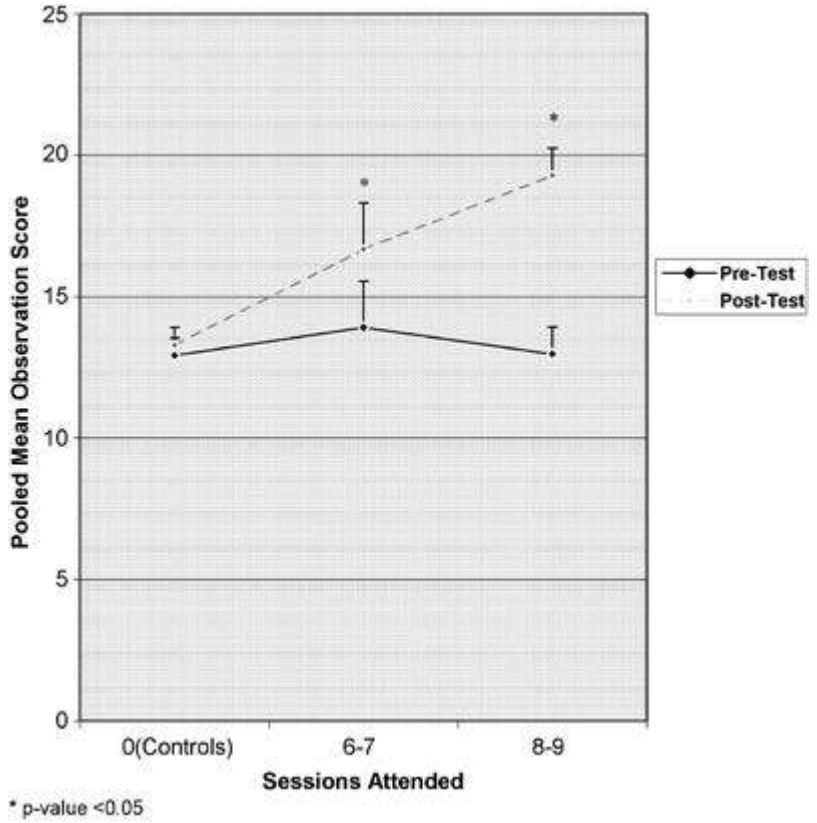
Sonke, J., & Pesata, V. (2015). The arts and health messaging: Exploring the evidence and lessons from the 2014 Ebola outbreak. BMJ Outcomes, 1, 36-41.

Arts in clinical training

Arts appreciation training ➔

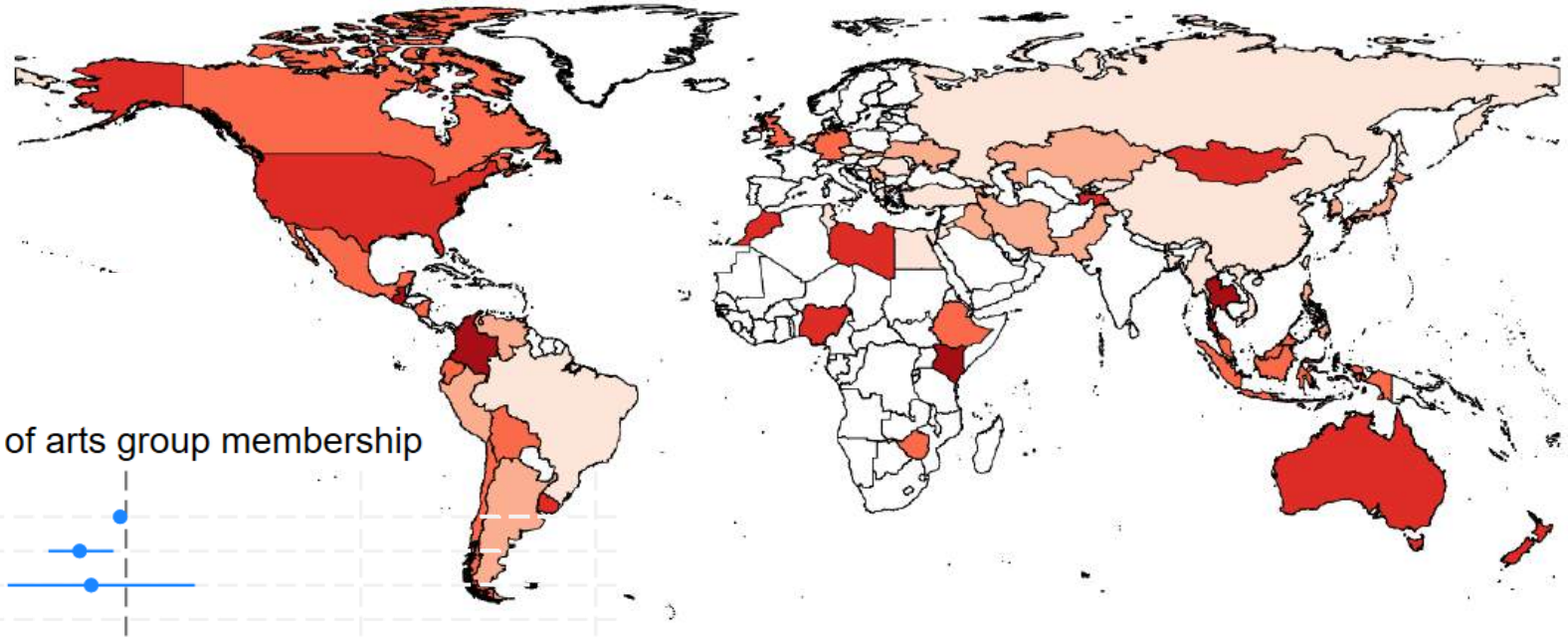
Lung nodule detection task 🡻

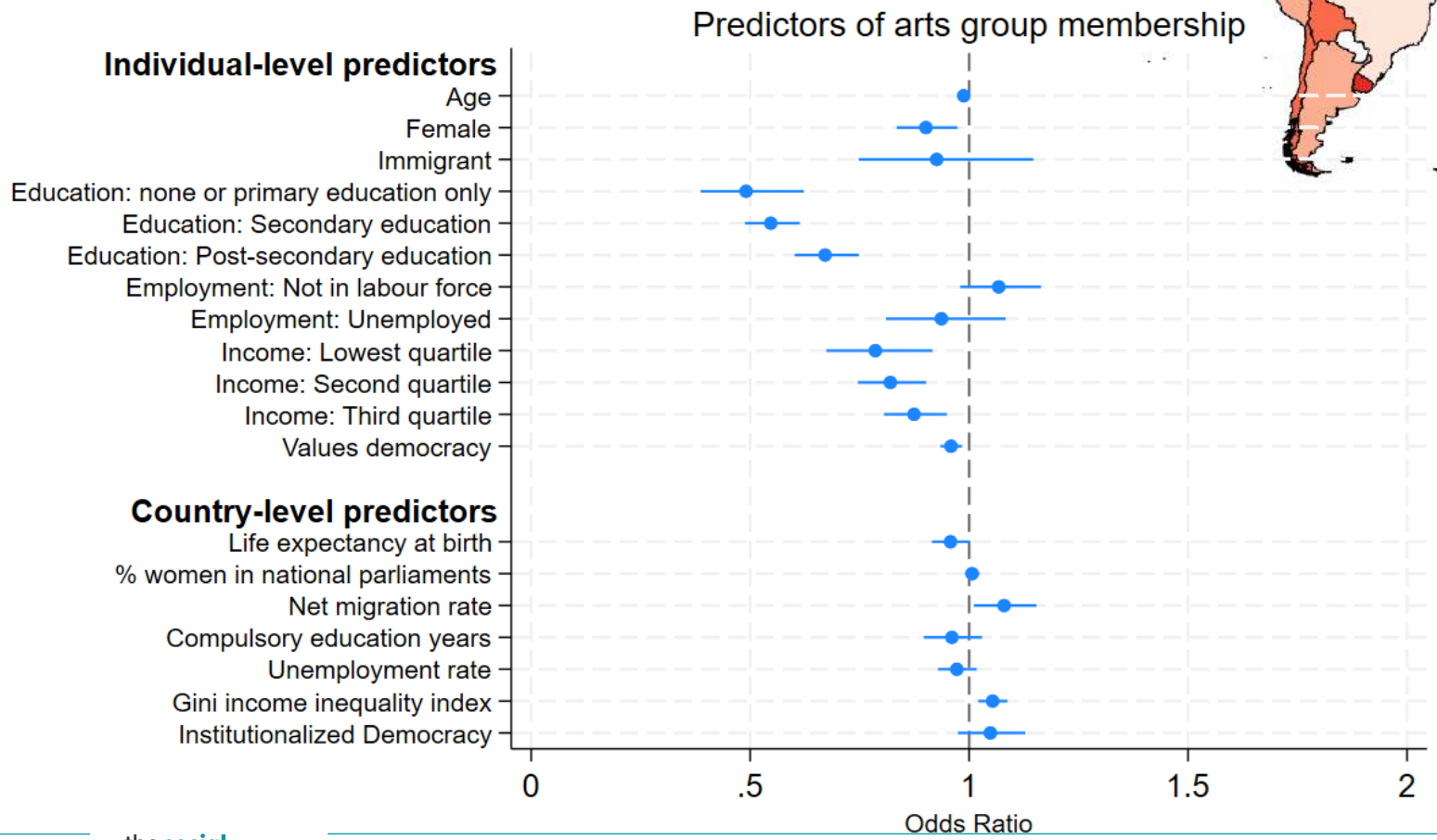


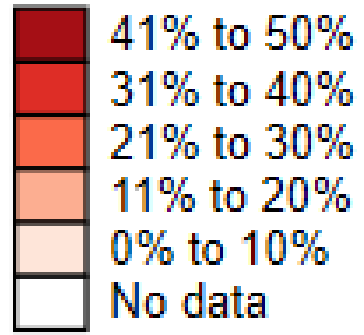


Drew et al. 2013 Psych Sci
Naghshineh et al. 2008 J G Int Medicine

Arts behaviours

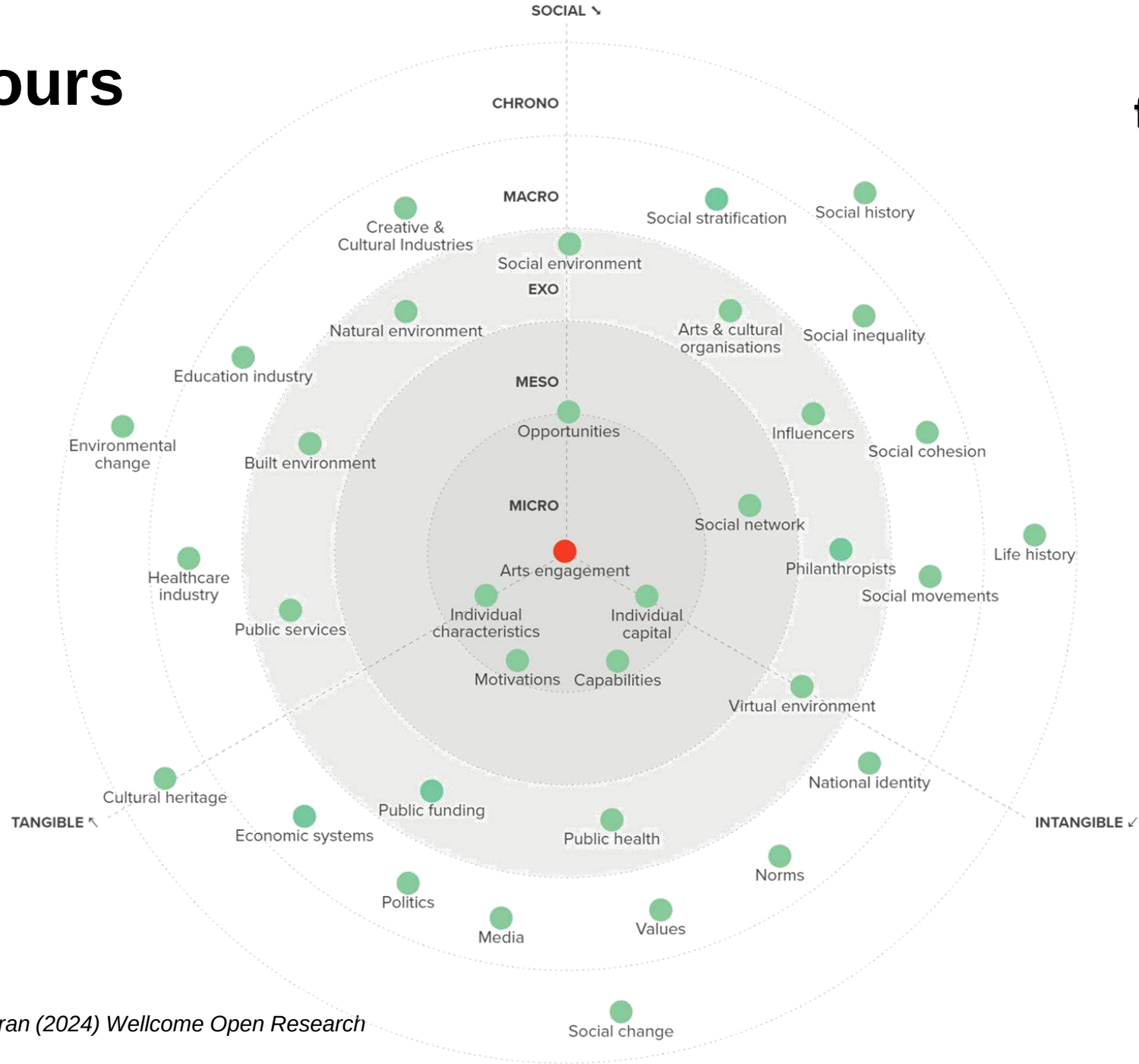




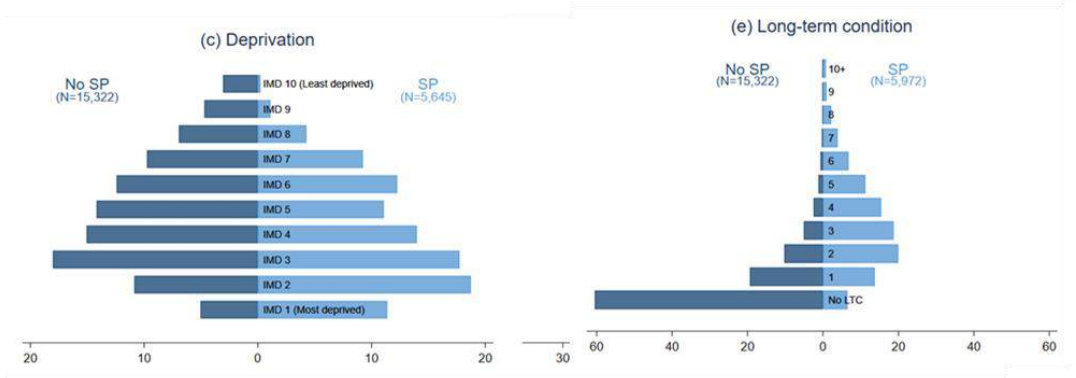


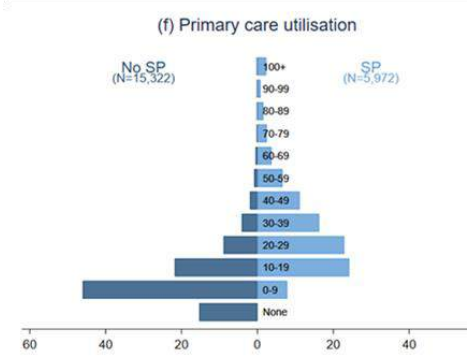
Arts behaviours

RADIANCE framework



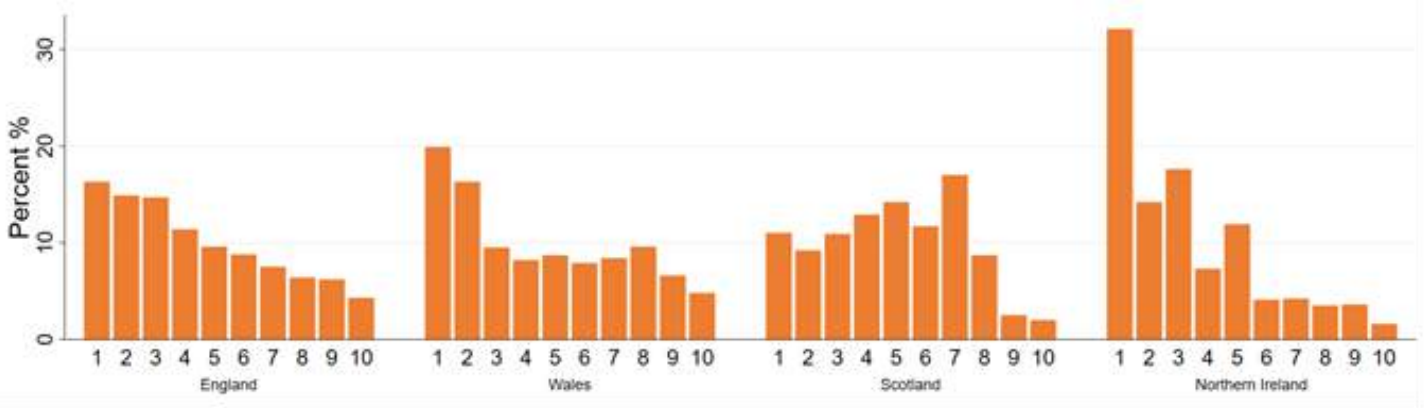
Social Prescribing

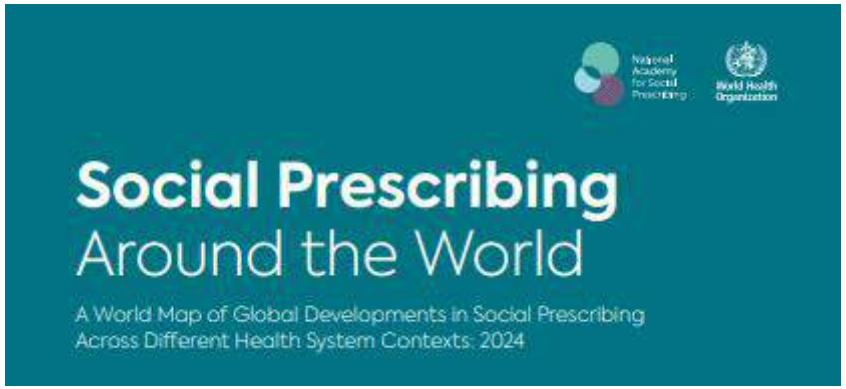




↑ N=19,000 in NW London GP records

Linked cross-sector referrals
🡻 N=160,128 across the UK





Bu & Fancourt (2020) NHS England Report
Fancourt & Steptoe (under review)

Bu & Fancourt (2024) In press

Health service utilisation

Model	Estimate (95% CI) (n = 8635)[a]									
	Inpatient care			Outpatient care				Community health care		
	Hospital stay, OR	Length of hospital stay, IRR	Readmission to hospital, OR	Outpatient surgery, OR	Physician visit, OR	No. of physician visits, IRR	Dental care, OR	Home health care, OR	Nursing home stay, OR	Nights in nursing home, IRR
Overall creative engagement (cross-sectional)										
Model 2[d]	0.92 (0.83-1.02)	0.87 (0.74-0.99)	0.84 (0.72-0.97)	1.19 (1.07-1.33)	1.00 (0.84-1.19)	0.97 (0.90-1.05)	1.13 (1.02-1.26)	0.81 (0.69-0.96)	0.49 (0.38-0.65)	0.34 (0.22-0.54)
Patterns of creative engagement over time (longitudinal over 4 years)										
Increased engagement	1.02 (0.73-1.42)	0.93 (0.56-1.53)	0.98 (0.60-1.61)	0.78 (0.52-1.19)	0.91 (0.52-1.57)	0.92 (0.79-1.07)	1.20 (0.86-1.68)	0.98 (0.61-1.56)	0.95 (0.43-2.12)	2.82 (0.67-11.83)
Decreased engagement	1.44 (1.11-1.86)	1.23 (0.90-1.67)	1.34 (0.96-1.89)	0.60 (0.43-0.83)	0.60 (0.40-0.89)	1.02 (0.85-1.22)	0.64 (0.49-0.84)	1.29 (0.95-1.77)	1.78 (1.23-2.57)	1.61 (0.71-3.64)
Consistent nonparticipation	0.90 (0.61-1.31)	1.10 (0.71-1.71)	1.31 (0.80-2.13)	0.90 (0.56-1.45)	0.49 (0.29-0.83)	1.22 (0.83-1.79)	0.96 (0.65-1.41)	1.29 (0.78-2.12)	1.52 (0.78-2.98)	5.11 (1.07-24.37)

Arts, crafts, creative hobbies, gardening, baking, cooking

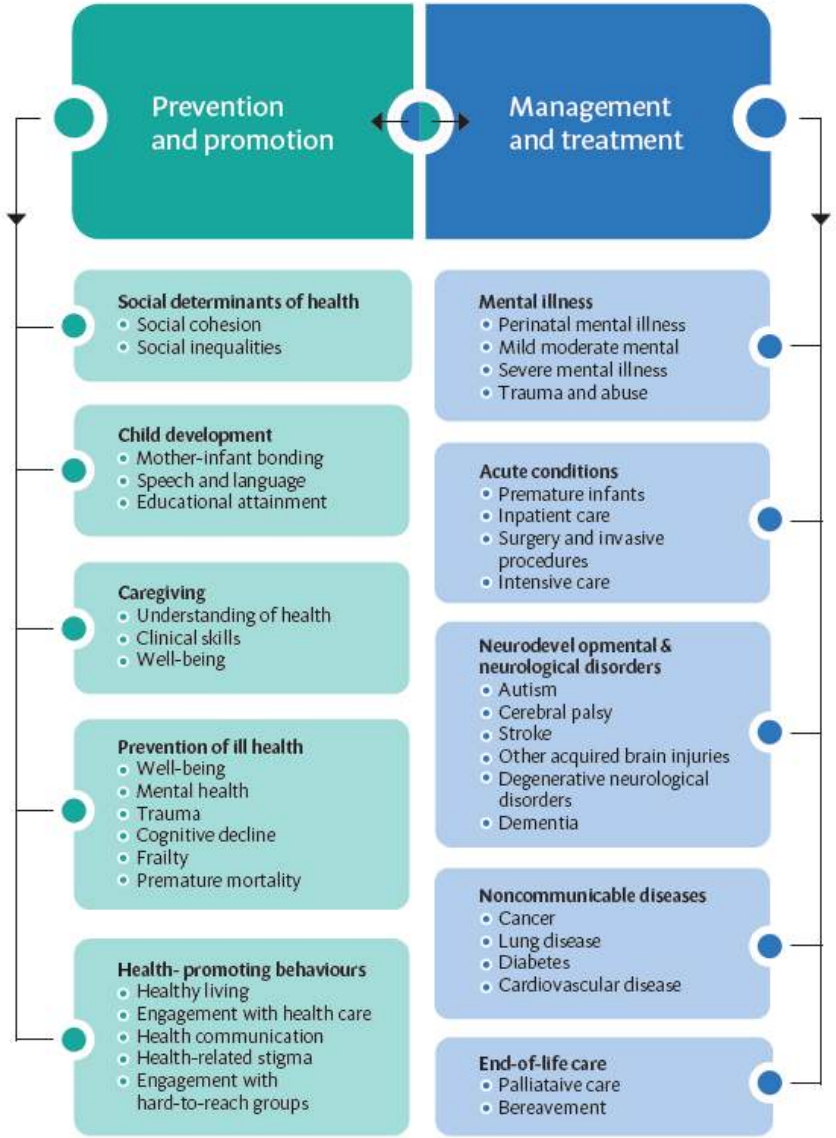
£3.42

Monetary value

Benefit to individual	Benefit to wider society	
INDIVIDUAL IMPACT QALY[D] benefit	HEALTH AND SOCIAL CARE IMPACT Healthcare costs avoided	PRODUCTIVITY IMPACT Includes both paid and unpaid productivity

*** REPORT COMING AUTUMN 2024 ***

WHO Report on Arts & Health



- Downloaded >200,000 times (4th most downloaded WHO publication ever)
- Translated into multiple languages
- Led to specific arts-health policies in 8 countries
- Led to new reports from UNESCO, OECD & European Commission
- Named the Global Aesthetic Achievement of 2019

- UCL-SBB designated WHO Collaborating Centre
- UCL-SBB identified 172 arts-health policy reports globally
- WHO-Jameel Arts Health Lab launched ($5 million investment)
- New WHO Technical Report underway
- Plans for a WHO Technical Briefing and WHO Technical Resolution


Health Policy

The arts in public health policy: progress and opportunities

Introduction

Over the past decade, there has been increasing interest from researchers, health practitioners, artists, and policy makers in the role of the arts in addressing some of our most pressing public health challenges. In 2019, WHO's Health Evidence Network released a landmark scoping review of over 3000 research studies that explore the effect of the arts (including participating in performing arts, visual arts, and literature and engaging with culture pathways between the arts, health and social care can provide creative solutions to help to achieve the Health 2020 targets and the Sustainable Development Goals[2]. WHO recommends that action is targeted towards ensuring equity of access to arts and culture, training for health and arts practitioners, and identifying specific public health areas for collaboration.[3]

However, it is unclear what progress is being made towards these goals globally. In this Health Policy, we

DAISY FANCOURT

ARTS IN HEALTH

Designing and Researching Interventions

the social biobehavioural research group

UCL

The Impact of Arts and Cultural Engagement on Population Health

Findings from Major Cohort Studies in the UK and USA 2017 – 2022

PENGUIN BOOKS

New book

Coming early 2026

UCL

the social biobehavioural research group

World Health Organization

The health benefits of arts & cultural engagement:

zooming from psychobiological mechanisms to population-level effects

Prof Daisy Fancourt

Professor of Psychobiology & Epidemiology

Head, Social Biobehavioural Research Group, UCL

Director, WHO Collaborating Centre on Arts & Health

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NATIONAL ENDOWMENT for the ARTS

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WHO 75

Jameel Arts & Health Lab

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