

the **social**
biobehavioural
research group

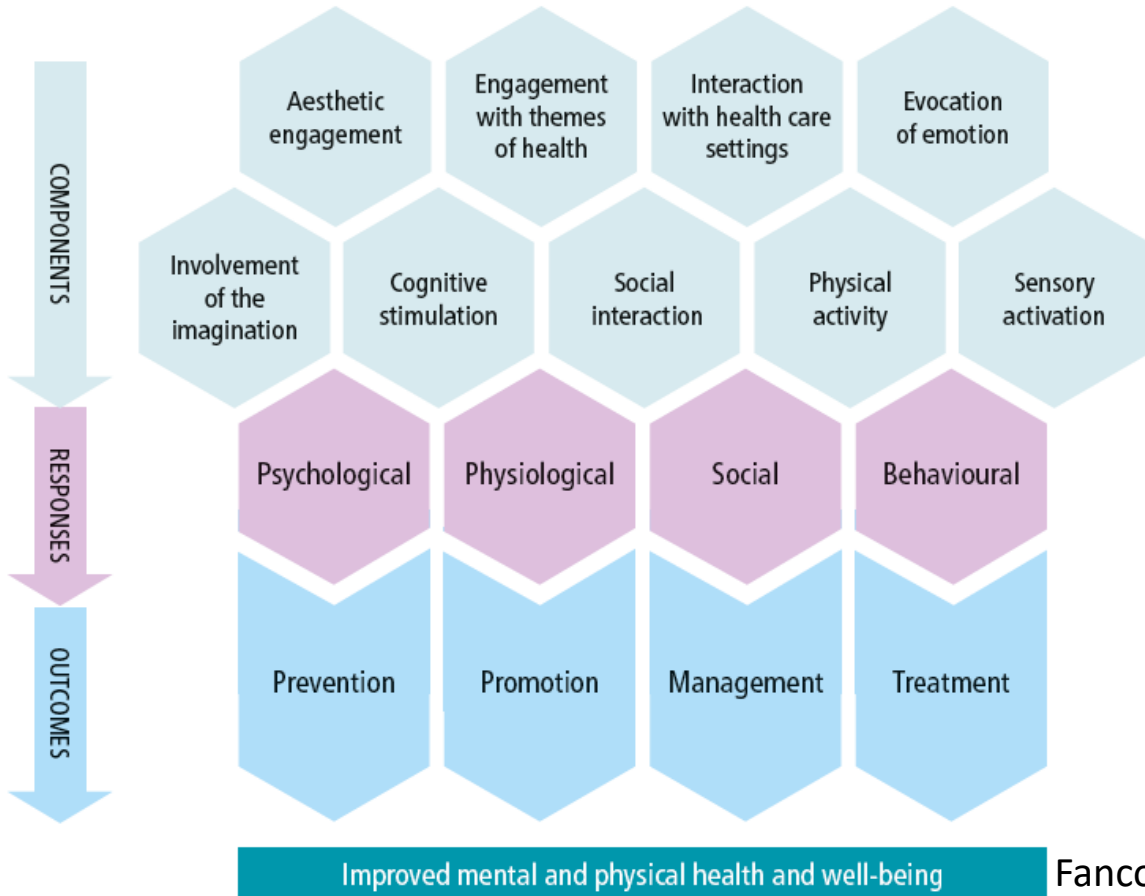
Arts and health across the lifespan: Findings from major UK & US cohort studies

Dr Hei Wan (Karen) Mak
Senior Research Fellow in Epidemiology/Statistics

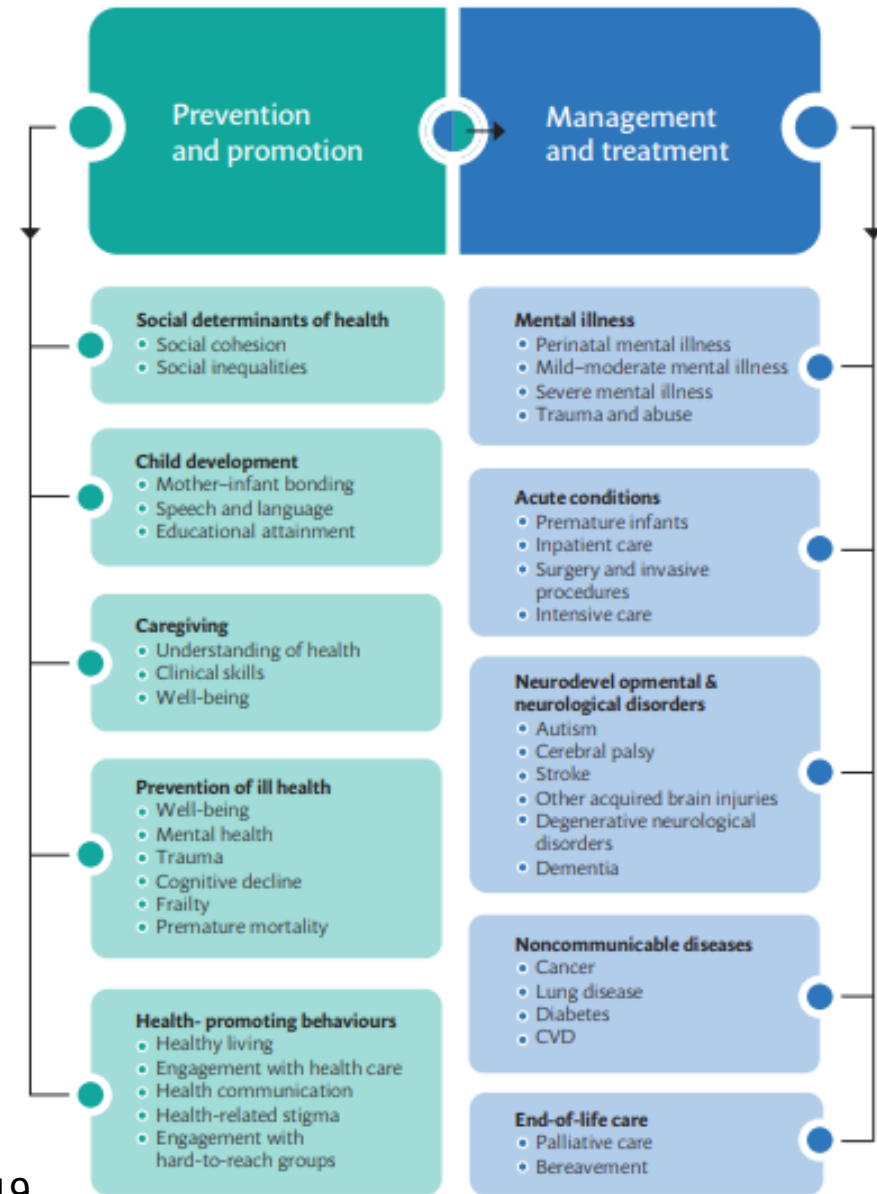


HEALTH EVIDENCE NETWORK SYNTHESIS REPORT 67

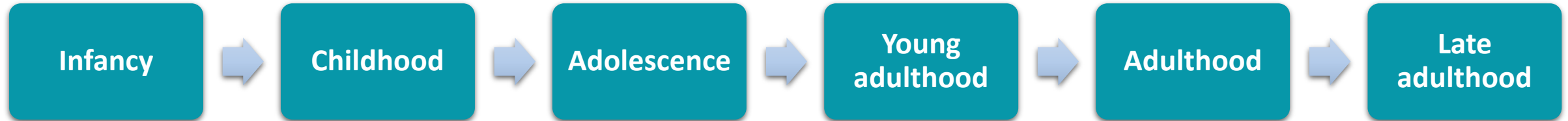
What is the evidence on the role of the arts in improving health and well-being?
A scoping review



Fancourt & Finn WHO 2019



Cohort study



UK

- British Birth Cohort Studies
- English Longitudinal Study of Ageing
- UK Household Longitudinal Study: Understanding Society
- Taking Part Survey (TPS).
- Great British Creativity Test
- Feel Good Test

USA

- General Social Survey
- Health and Retirement Study
- Wisconsin Longitudinal Study
- Early Childhood Longitudinal Study
- National Education Longitudinal Study
- National Longitudinal Study of Adolescent to Adult Health
- Panel Study of Income Dynamics

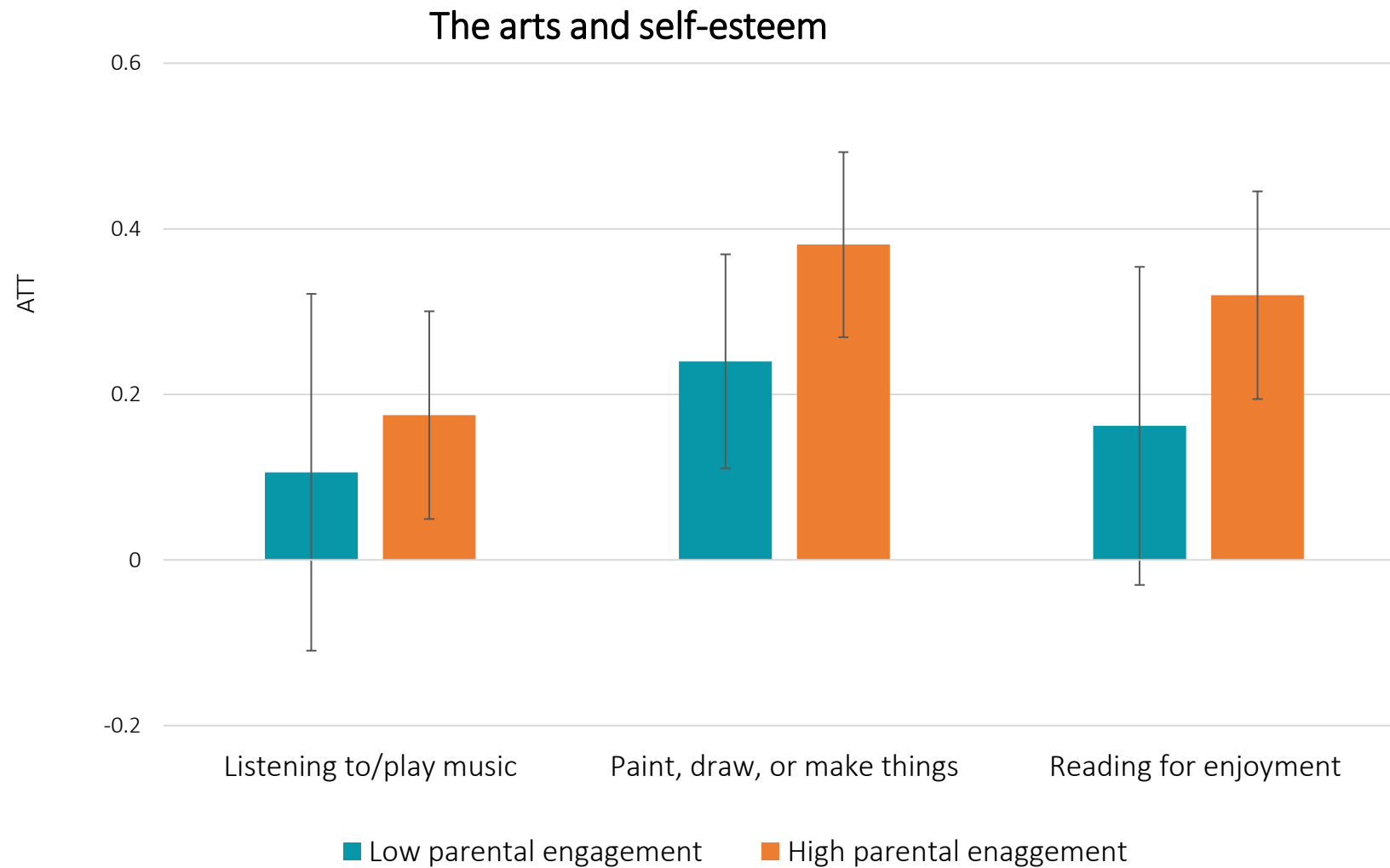
Measuring the arts



Children & young people

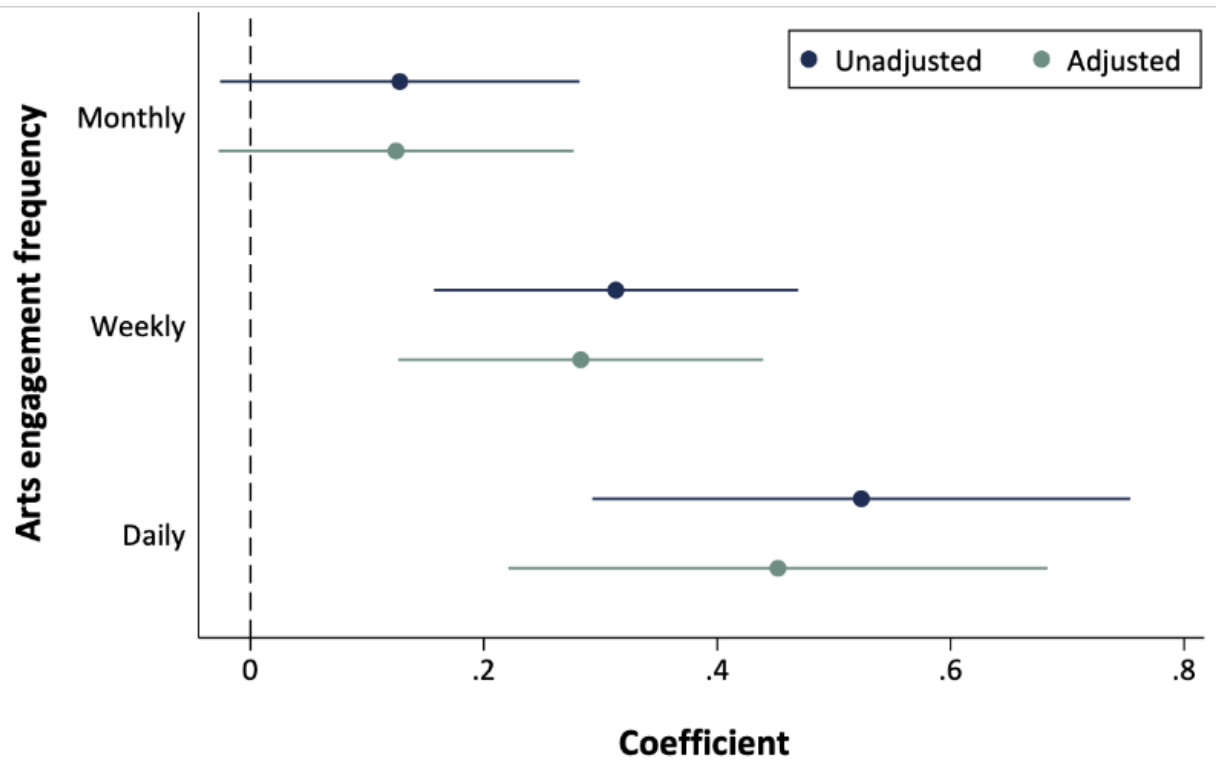


Children's development

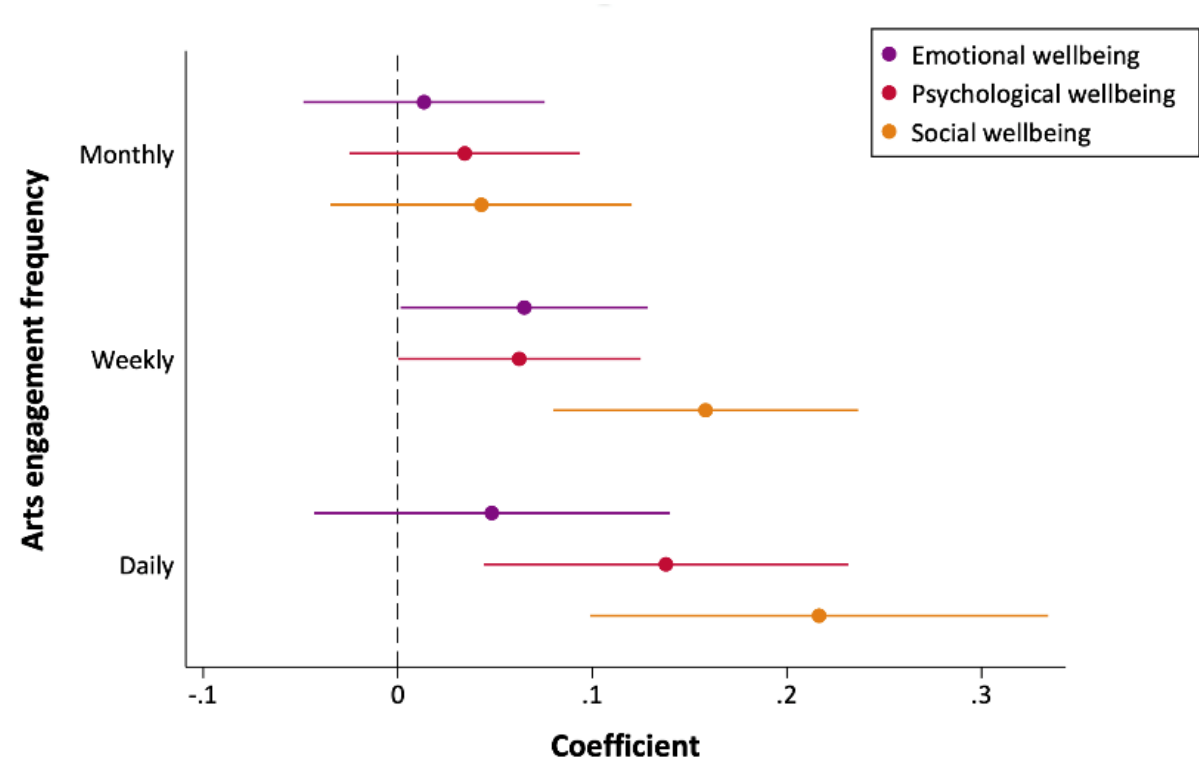


Mak et al. Ann. NY Aca of Sci, 2019

Arts engagement and flourishing in the US



Reference: no engagement



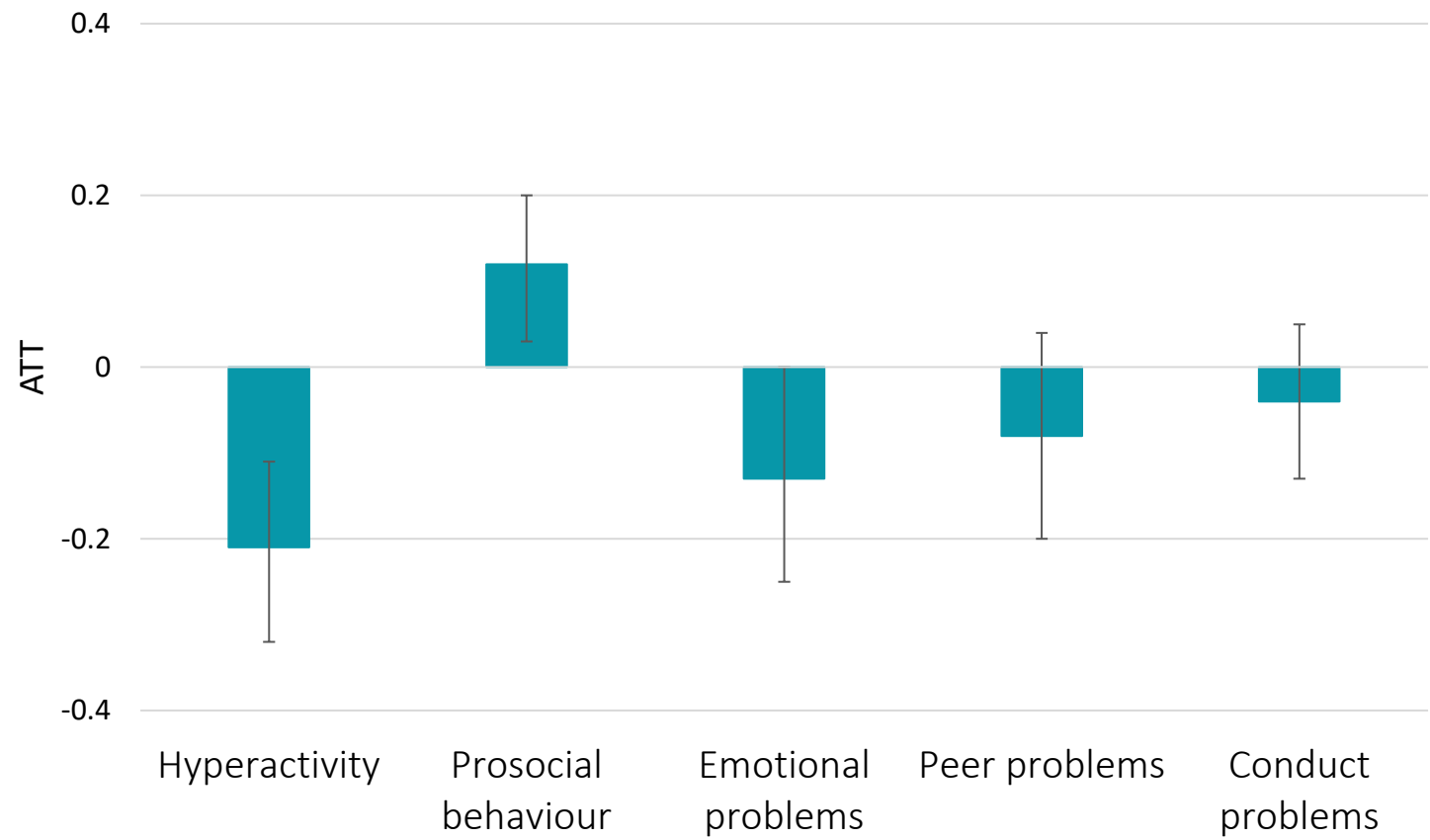
Reference: no engagement. All estimates adjusted.

- Following young adults aged 18-28 in the US for 14 years, arts engagement is associated with subsequent increases in flourishing, particularly **social wellbeing**.

Bone et al. Affec Sci 2022

Developmental and social behaviour

Reading for pleasure & strengths and difficulties

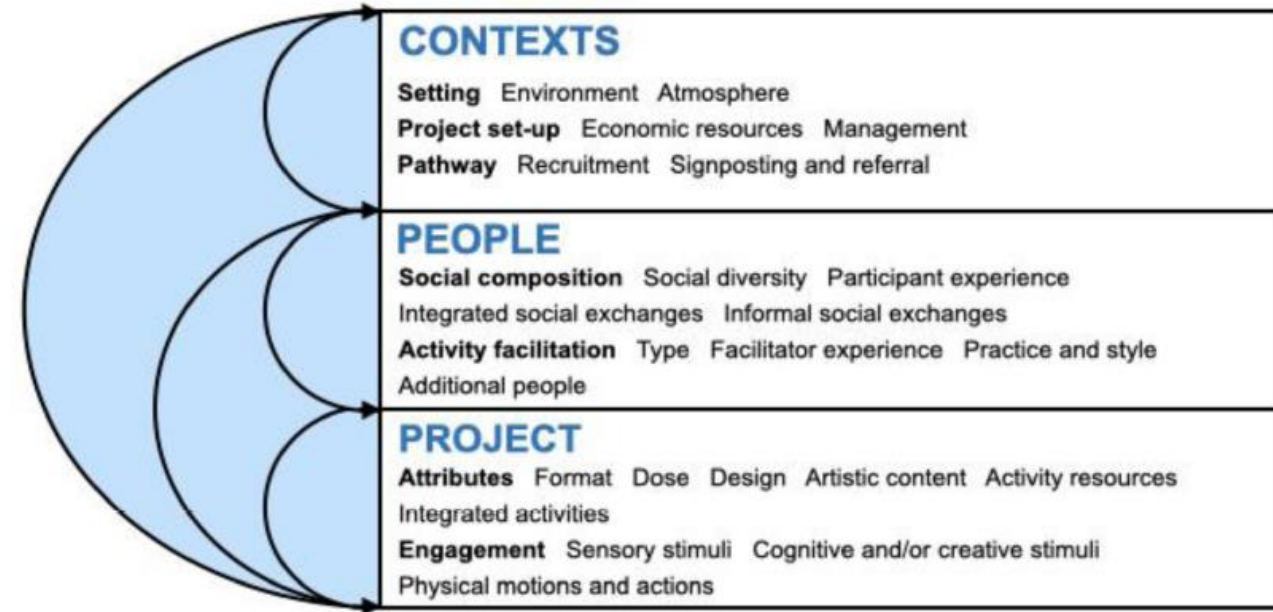
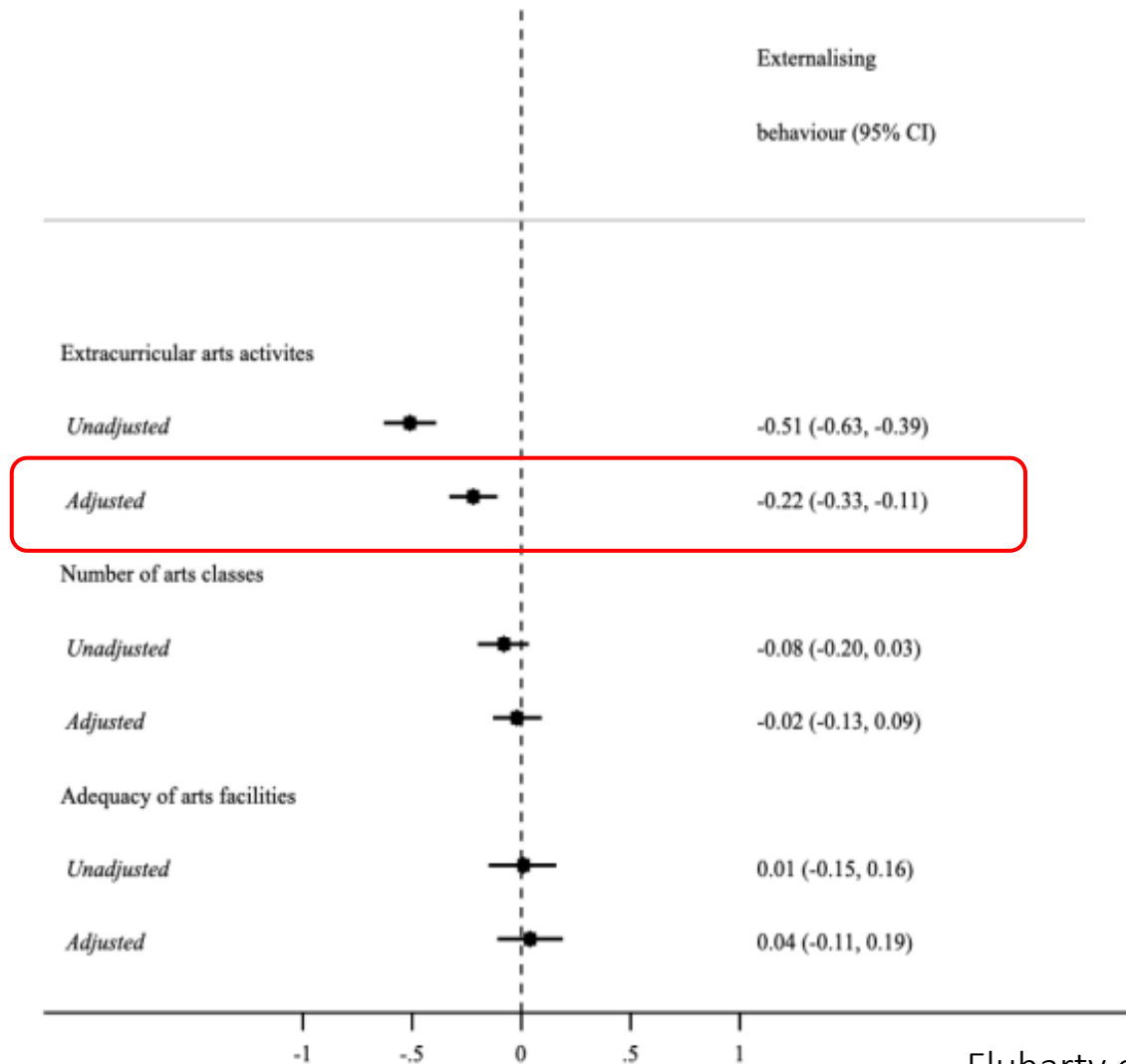


For children with a history of psychological and behavioural issues:

	ATT	95% CI	P-value
Hyperactivity/inattention	-0.12	-0.20, -0.04	0.005
Prosocial behaviour	0.08	-0.01, 0.16	0.077
Emotional problems	-0.07	-0.13, 0.00	0.046
Peer problems	-0.01	-0.08, 0.07	0.871
Conduct problems	-0.06	-0.14, 0.01	0.100

Mak et al. Soc Sci Med 2020

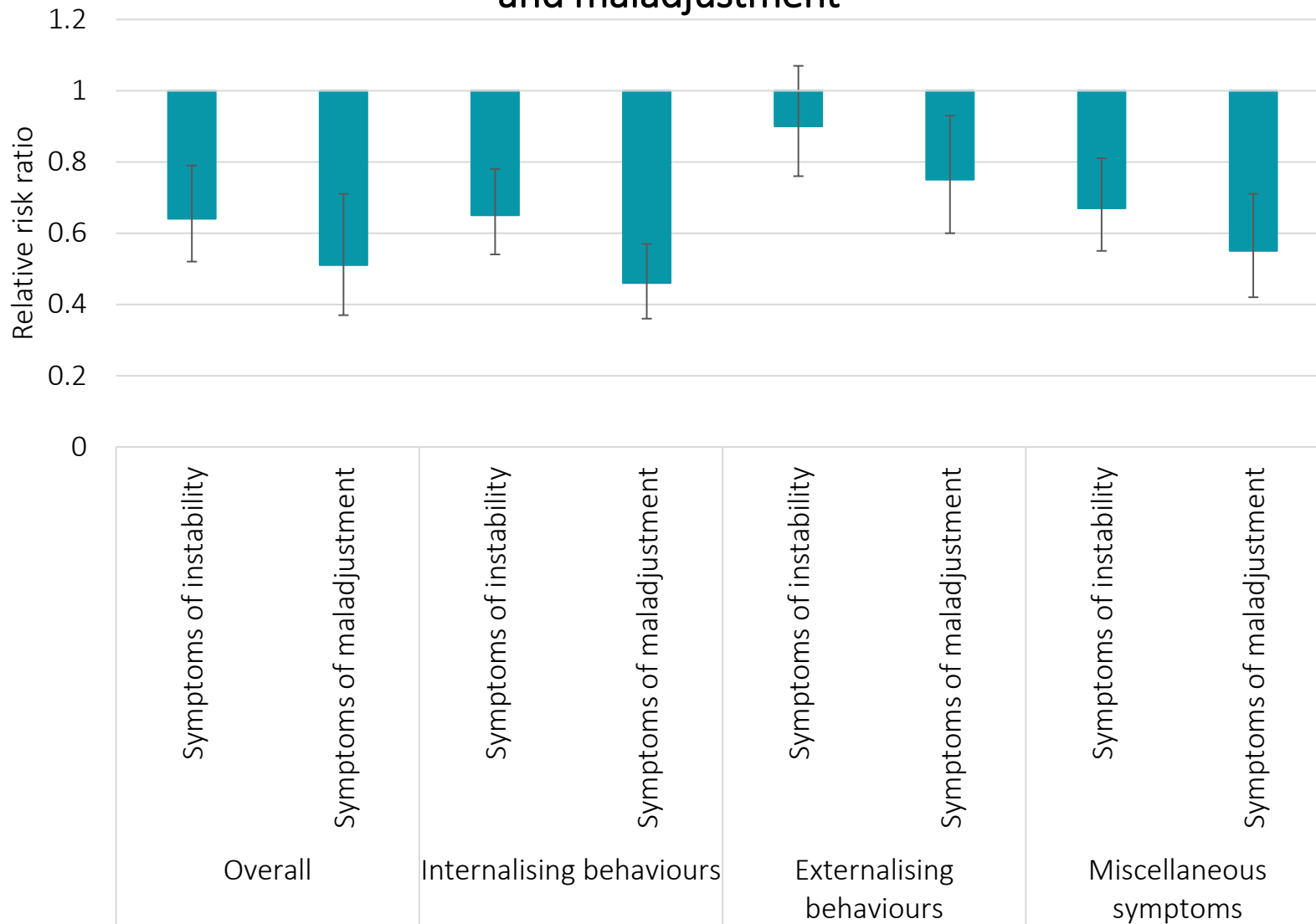
Extracurricular arts activities and school-based arts engagement and externalising behaviour in the US



Warran et al. 2022

Fluharty et al. PsyArXiv 2021

Creativity & symptoms of social ad behavioural instability and maladjustment



← This study suggests that building creative skills through arts engagement may help explain why the arts could help improve health.

Behavioural difficulties

	Whole sample	
	Behavioural difficulties	
	B ± SE	P
Model 1	-0.14 ± 0.01	<0.001
Model 2	-0.13 ± 0.01	<0.001
Model 3	-0.09 ± 0.01	<0.001
Model 4	-0.06 ± 0.01	<0.001
N	7700	

Mak et al. Sci Rep, 2019

Health behaviours

Descriptive statistics - Reading for pleasure (age 11) and health behaviours (age 14)



← Demographic factors, child development, child mental health, family relationships, and peer influence **explained** some of the associations.

Mak et al. Prev Med. 2020

Adults



Mental health

Avoidance strategies

	General factor
1. . . I can block out any unwanted thoughts or feelings	0.52
2. . . I can shake off any anxieties in my life	0.63
3. . . I feel I am in my own little bubble, away from ordinary worries	0.54
4. . . it helps me forget about my worries	0.59
5. . . it helps me to disengage from things that are bothering me	0.58
6. . . it makes me feel detached from negative things in my life	0.57
7. . . it redirects my attention so I forget unwanted thoughts and feelings	0.48

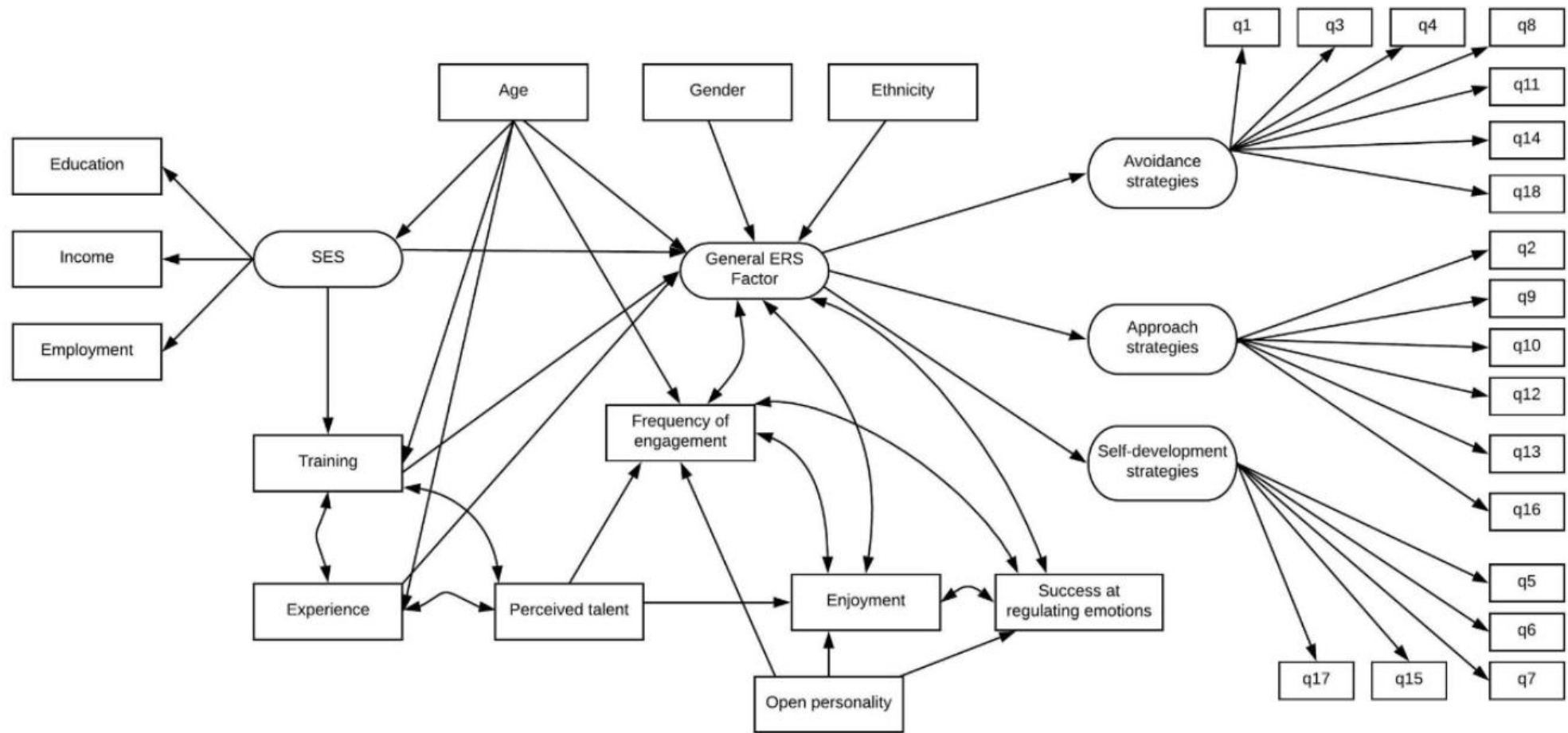
Approach strategies

8. . . I can contemplate what is going on in my life with a clear mind	0.63
9. . . it helps me refocus on what matter in my life	0.69
10. . . it helps me to come to terms with my own emotions	0.64
11. . . it helps me to put worries or problems I have in perspective	0.66
12. . . it helps me to understand my own feelings on things that are on my mind	0.62

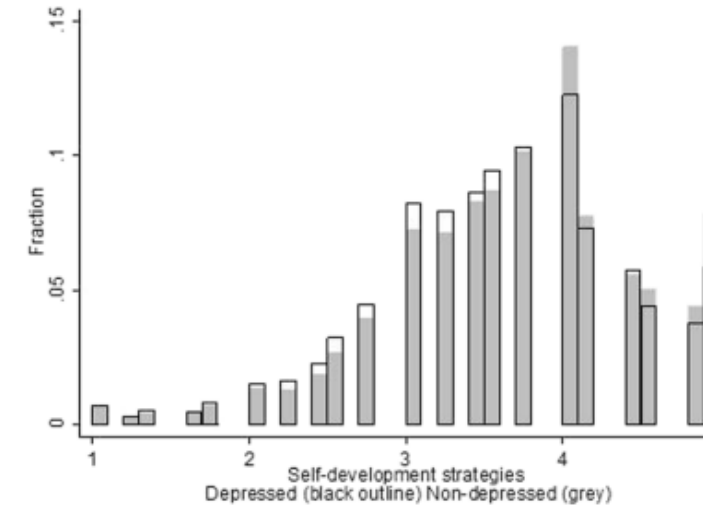
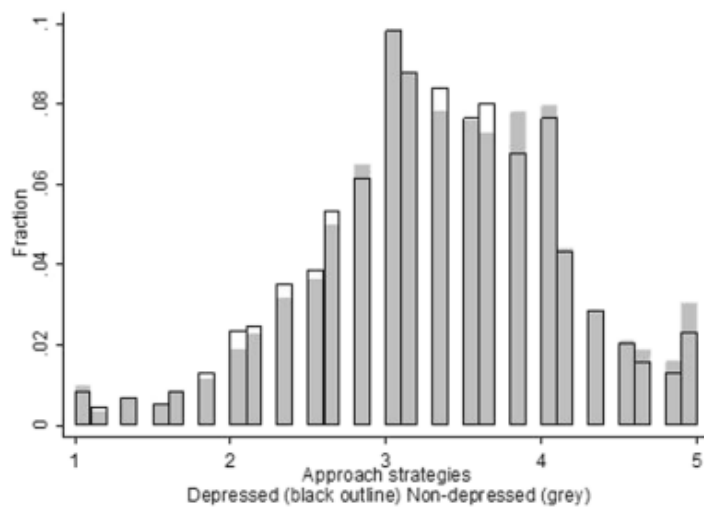
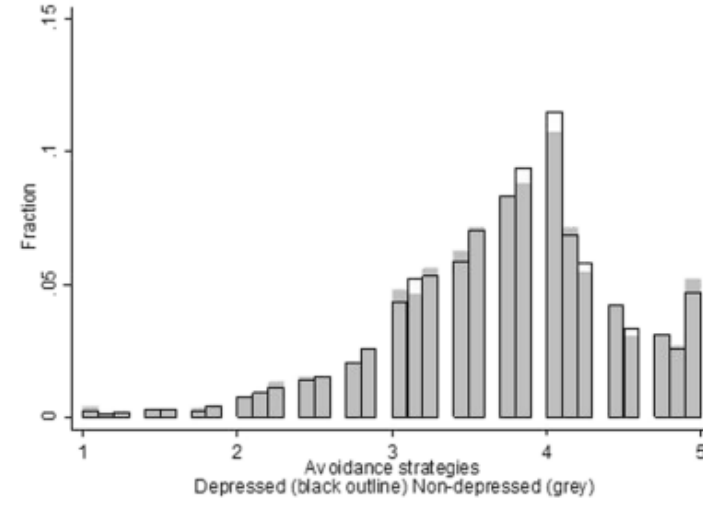
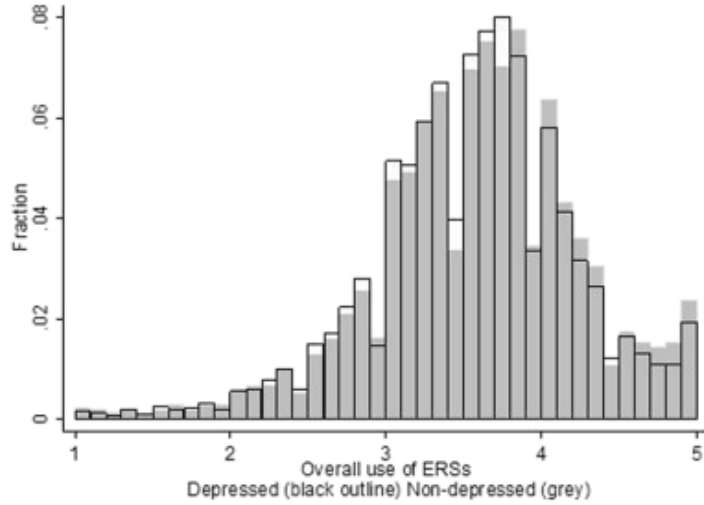
Self-development strategies

13. . . it makes me reflect on my emotions	0.57
14. . . I feel more confident in myself	0.66
15. . . it boosts my self-esteem	0.65
16. . . it gives me a sense of purpose	0.57
17. . . It makes me feel stronger in myself	0.71
18. . . it reaffirms my identity	0.64

Fancourt et al. Plos one 2019



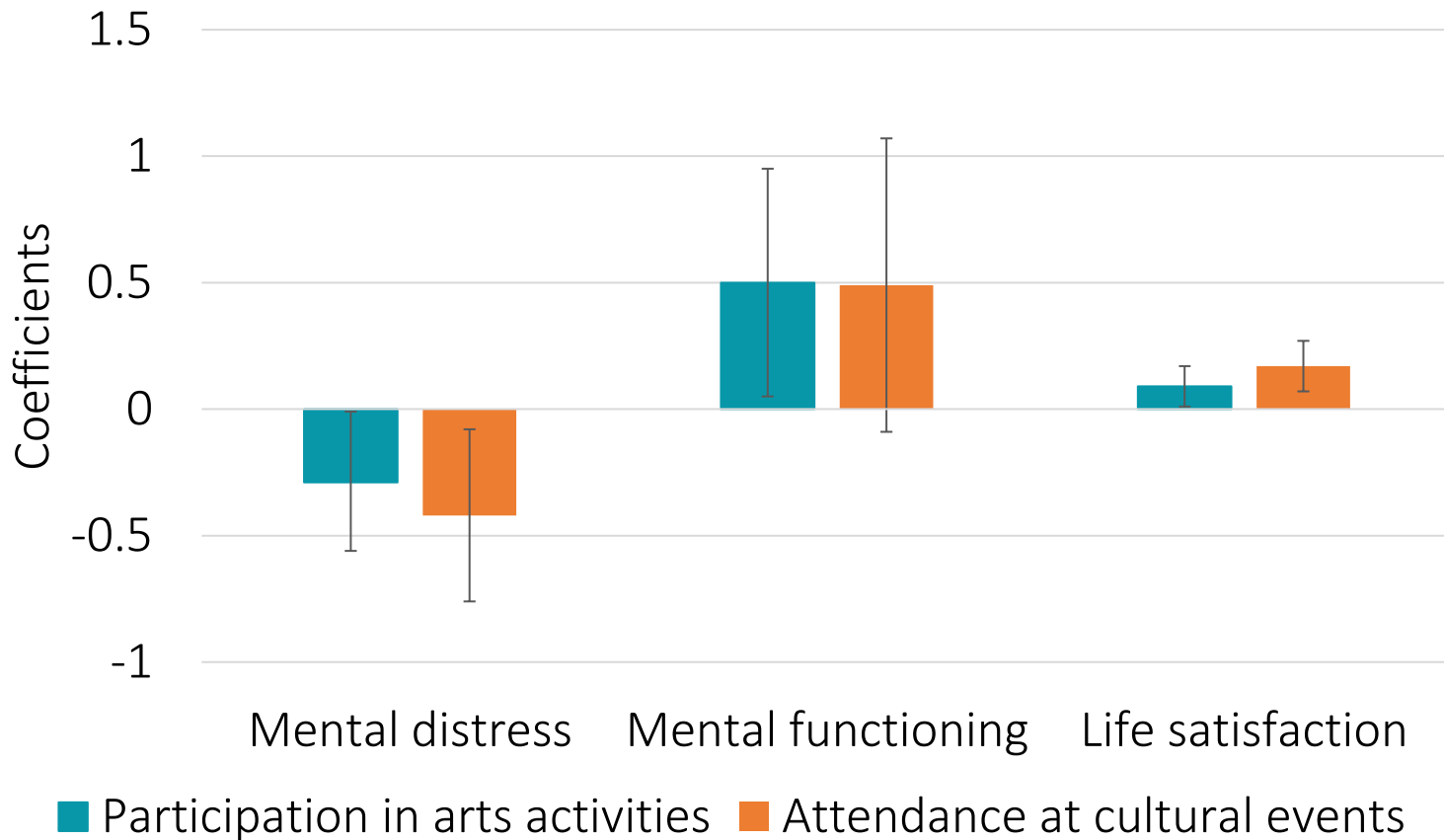
- Being female, having fewer socio-economic resources, having previous training in an artistic activity, engaging regularly, and enjoying the activity were associated with a **greater ability** to use artistic activities to regulate emotions



← No difference in the overall use of emotion regulation strategies when engaging in the arts between people with and without depression.
← This helps explain why the arts can benefit people with depression.

Mental wellbeing

Arts engagement and mental wellbeing over 3 years



← After factoring in **all time-constant variables** e.g. gender, ethnicity, personality, past medical history, and important time-varying variables e.g. marital status, age, health behaviours, social support, etc.

Wang et al. BMC Public Health 2020

Healthy ageing



Mental wellbeing

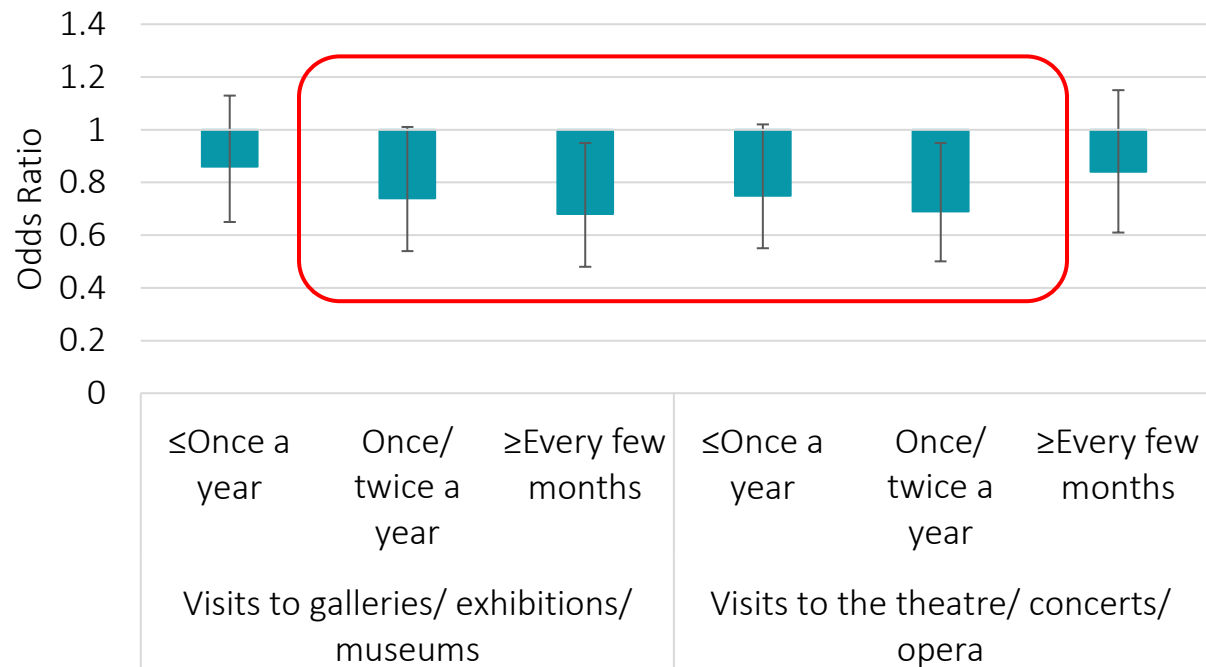
Step toe et al. PNAS 2019 →

Tymoszul et al. Soc Psychiatry
Psychiatr Epidemiol 2020 ↓

Factors of living a worthwhile life over 4 –year period

Factor	OR	β	95% CI	SE	P	E (CI)
Social variables						
Divorce ^a (%)	0.84		0.75–0.94		<0.001	1.5 (1.39)
Living alone ^b (%)	0.92		0.87–0.97		0.002	1.39 (1.21)
Close relationships ^c (n)		0.082		0.012	<0.001	1.59 (1.46)
Contact with friends \geq 1/wk ^d (%)	1.06		1.01–1.11		0.017	1.2 (1.08)
Organizations ^e (n)		0.033		0.010	0.002	1.31 (1.16)
Volunteer \geq monthly ^f (%)	1.10		1.04–1.16		<0.001	1.43 (1.24)
Loneliness rating ^g		-0.097		0.012	<0.001	1.67 (1.53)
Cultural activity \geq every few months ^h (%)	1.07		1.02–1.12		0.007	1.34 (1.16)

Arts engagement & loneliness over a 10-year period



Bone et al. Aging & MH 2022 ↓

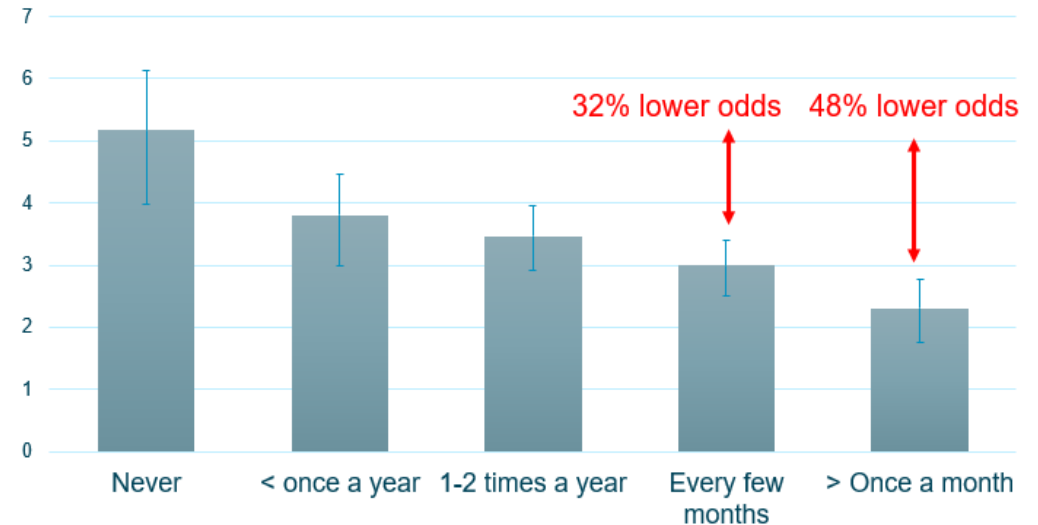
Arts group participation and wellbeing over a 4-year period in the US

Outcome	ATT	95% CI	p value
Evaluative wellbeing			
Life satisfaction	0.18	0.08 to 0.28	<0.001
Experienced wellbeing			
Positive affect	0.22	0.11 to 0.32	<0.001
Negative affect	0.07	-0.04 to 0.18	0.218
Eudaimonic wellbeing			
Purpose in life	0.10	-0.01 to 0.21	0.074
Constraints	-0.02	-0.13 to 0.09	0.731
Mastery	0.11	0.00 to 0.22	0.044

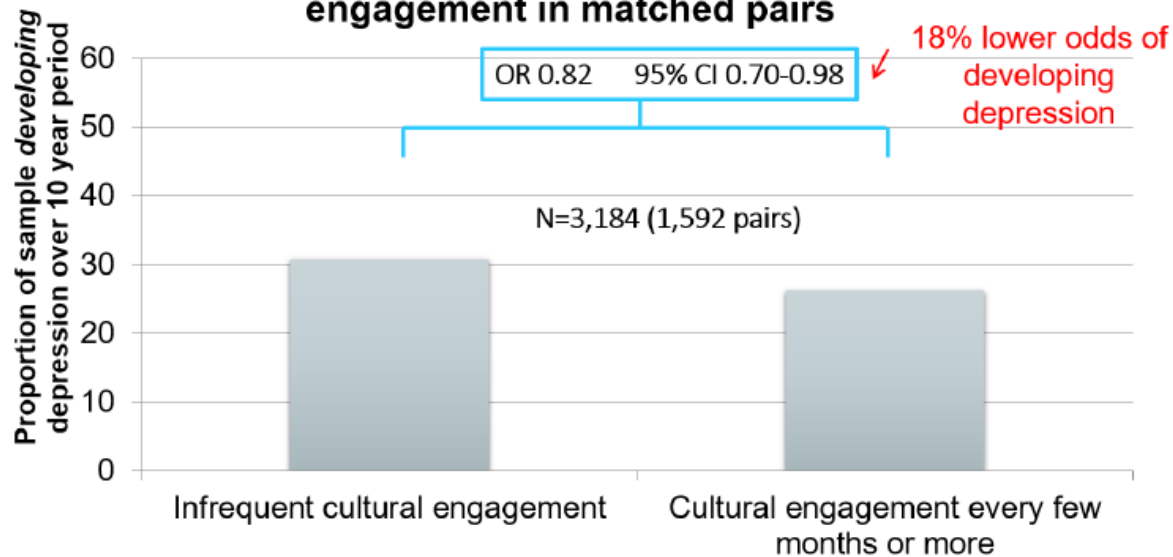
Depression

- Going to museums, theatre and cinema reduces the risk of developing depression in older age
- The greater the frequency, the lower the risk

Depression incidence rates per 100 person-years



Depression *incidence* over 10 years by cultural engagement in matched pairs



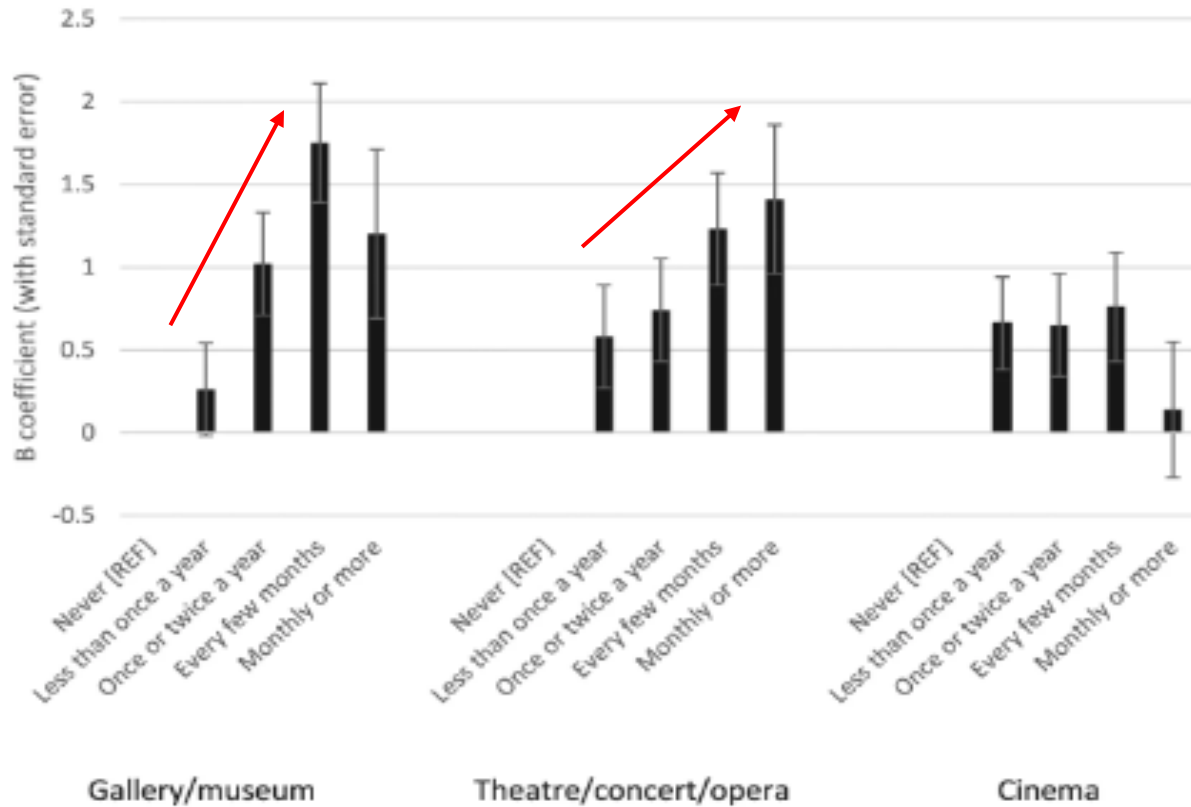
- Using three different statistical approaches, cultural engagement is linked with lower odds of depression in adults aged 50+
- SES may explain half of the association

Fancourt et al. Soc Sci Med 2019

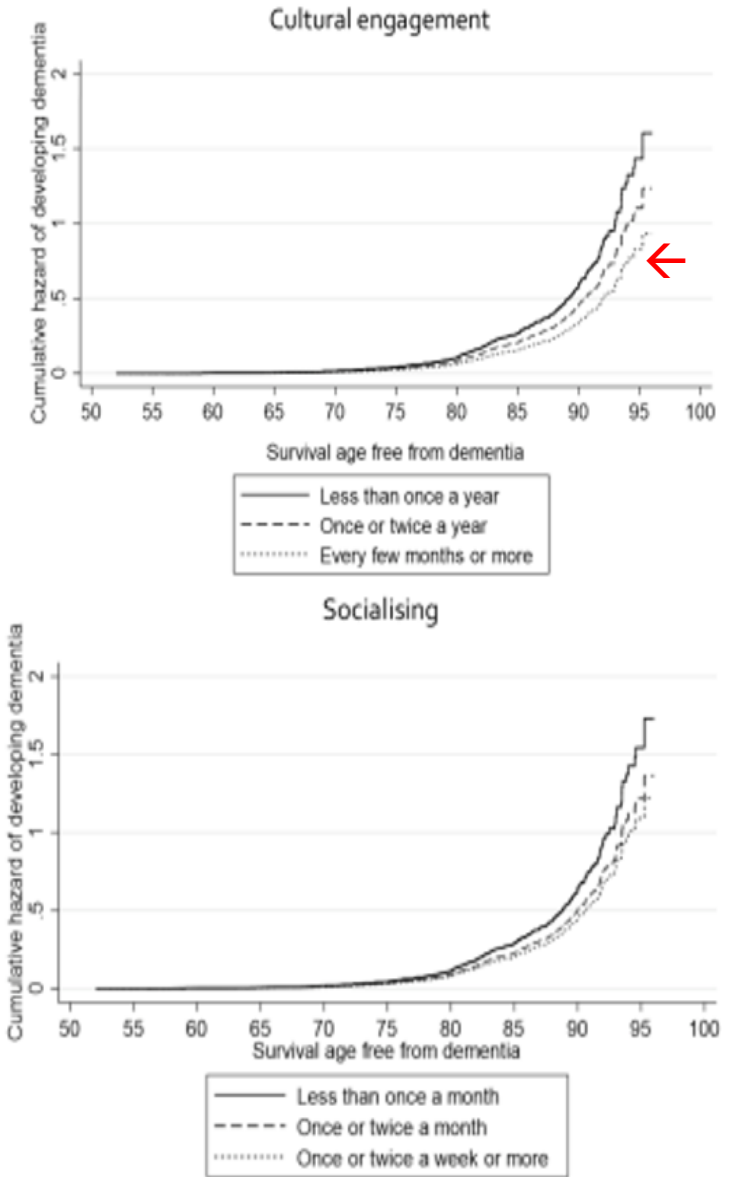
Cognition and dementia

Fancourt et al. JECH 2020

Cultural engagement and semantic fluency over a 10-year period



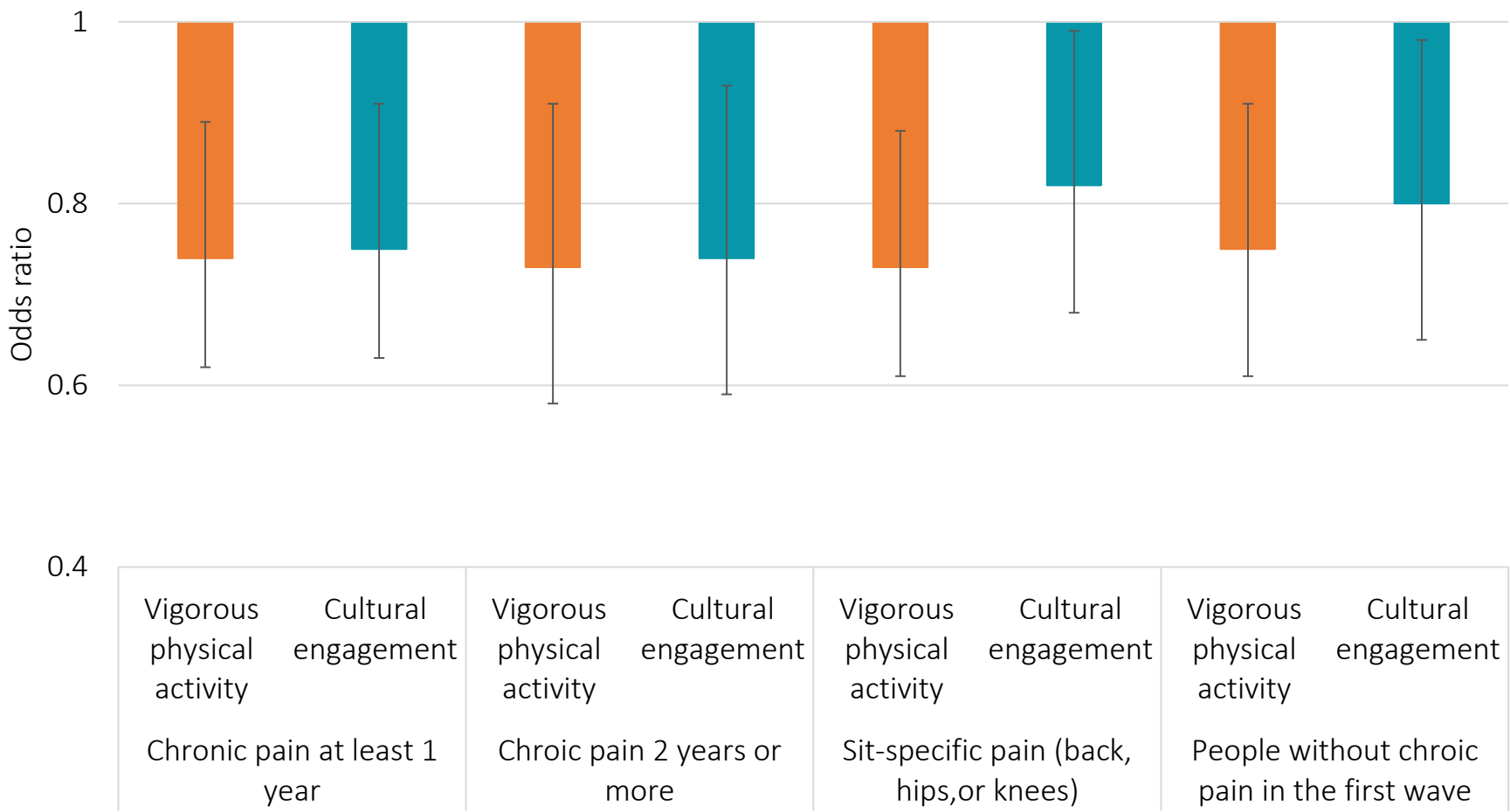
Museums and dementia incidence



Fancourt et al. Sci Rep 2018

Chronic pain

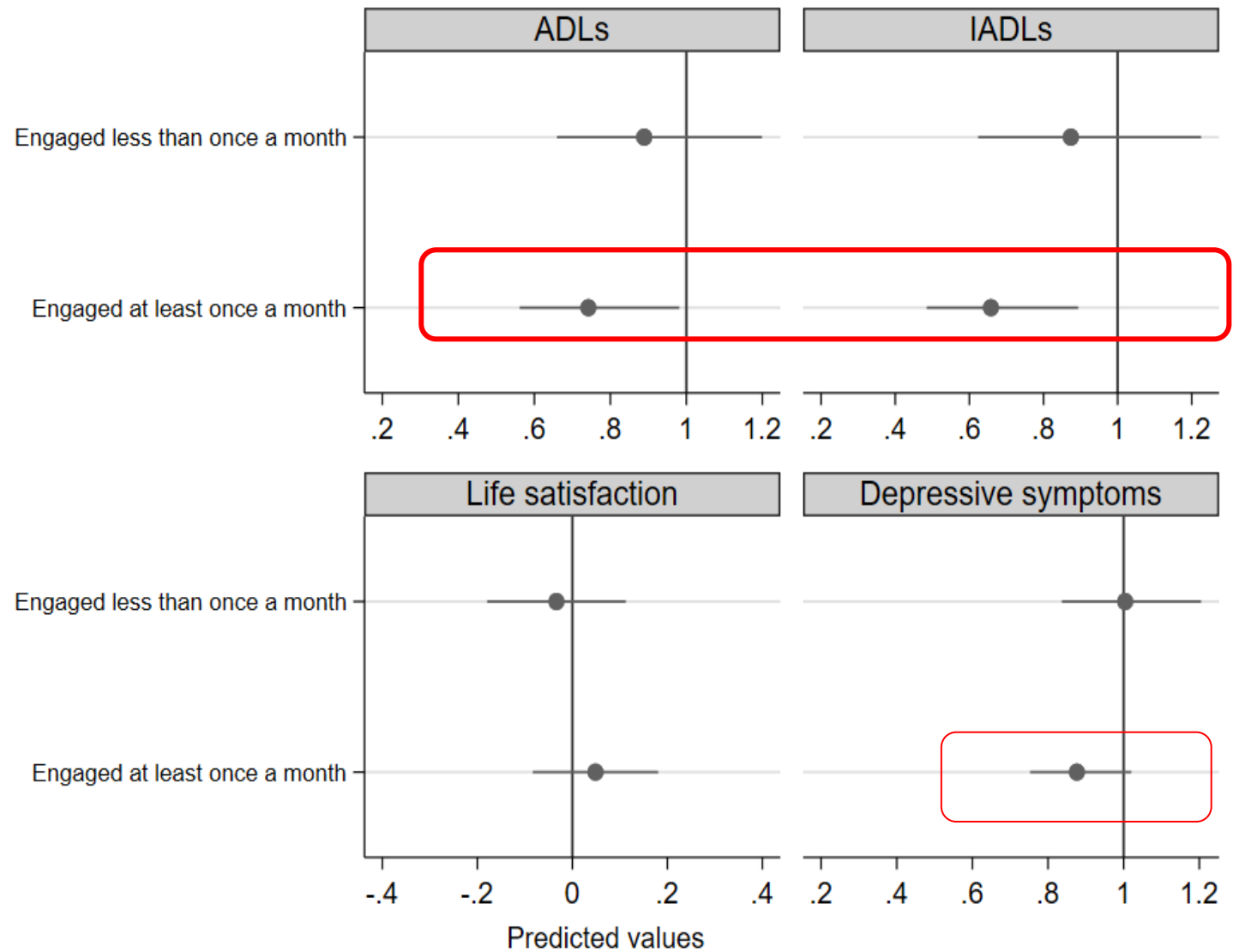
Physical and psychosocial factors and chronic pain



← The effect of cultural engagement was **comparable** to the effect of vigorous exercise on chronic pain.

Fancourt et al. J Pain 2018

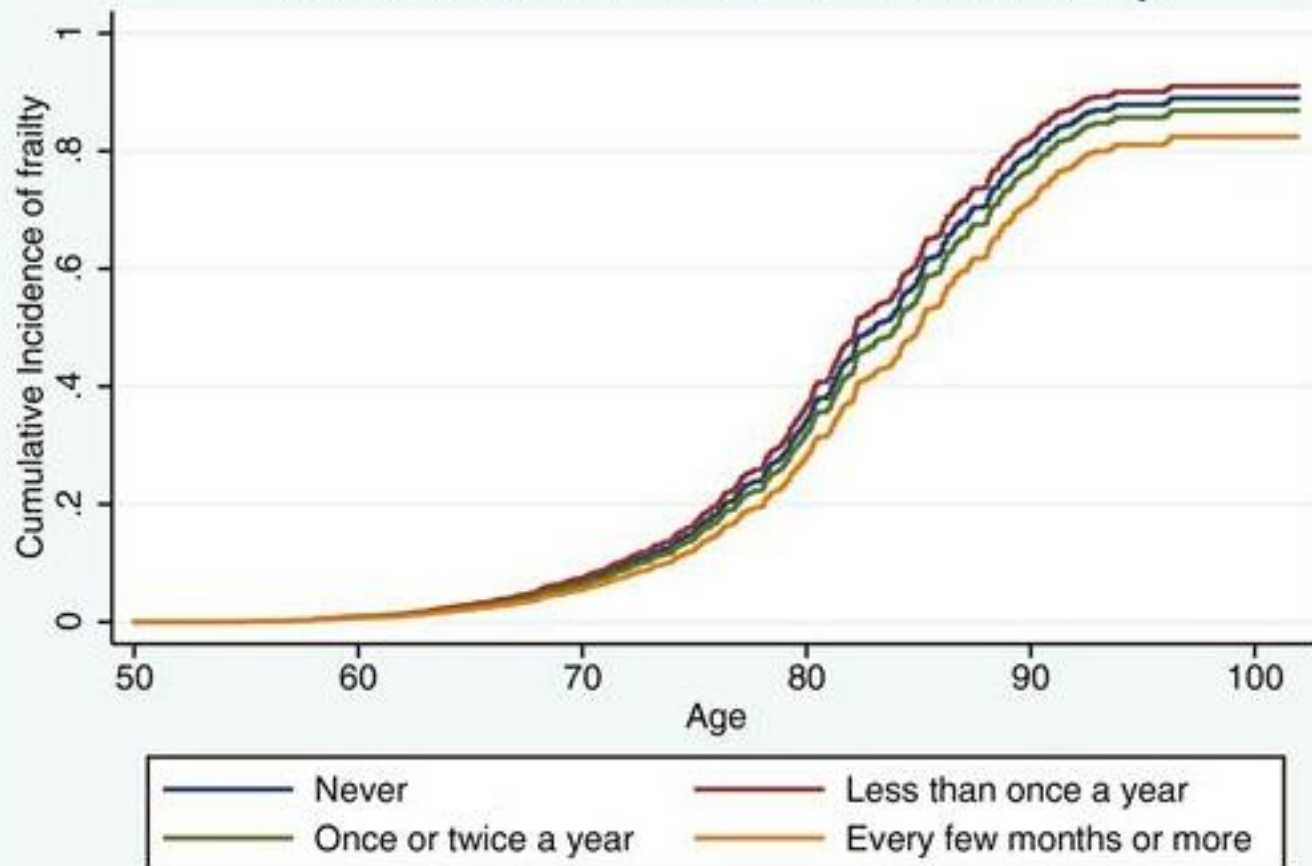
Chronic pain and psychological and physical wellbeing in the US



Borra et al. under review 2023

Frailty

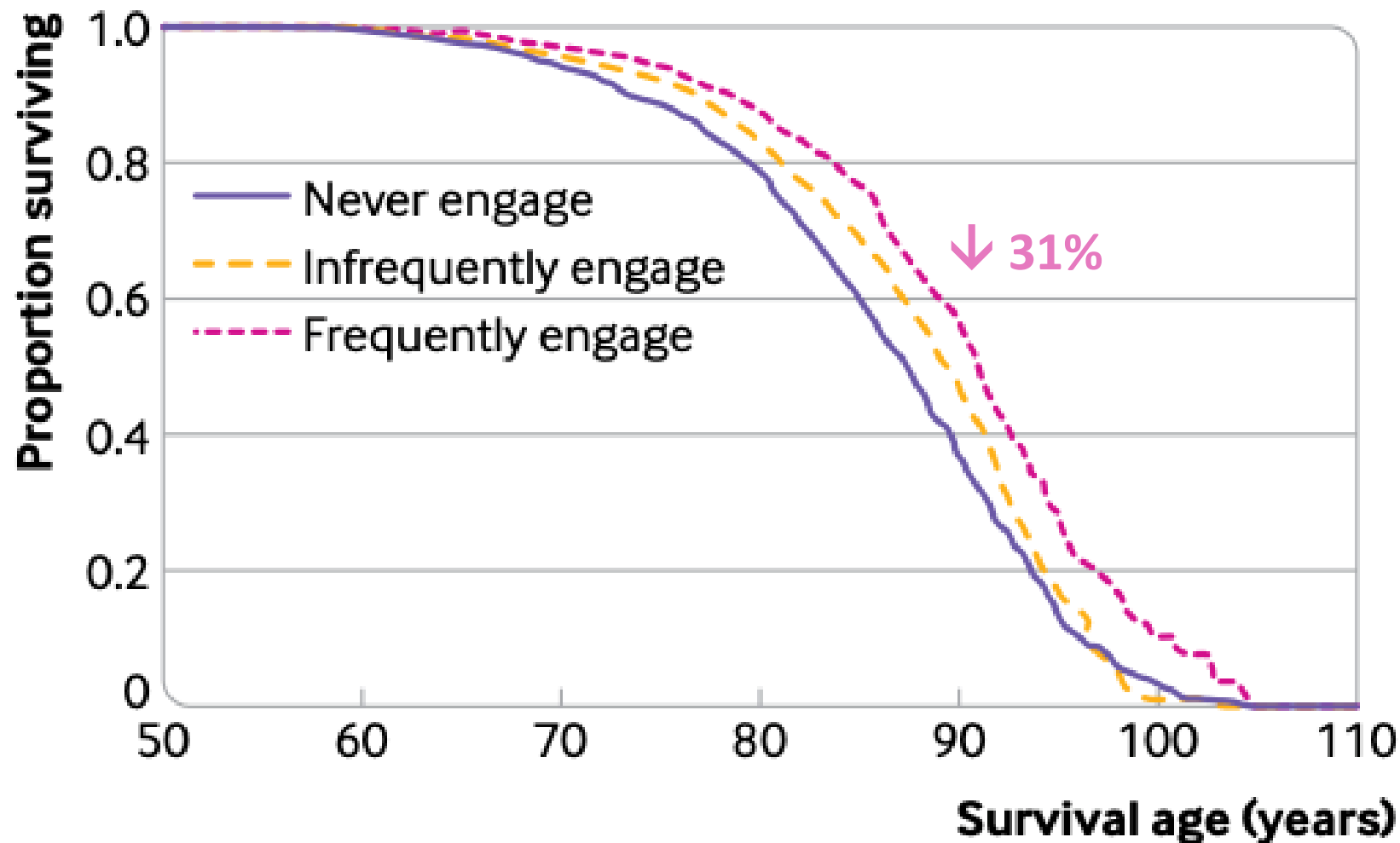
Modelled cumulative incidence of frailty



← 83% engaged in cultural activities
← only 41% engaged every few months or more

Rogers et al. J Gerontol: Series B. 2020

Mortality



- ← Cognition
- ← Mental health
- ← Physical activity

Fancourt et al. BMJ 2019

Underlying mechanisms



Social

- Foster prosocial behaviour
- Increase social contact
- Support social bonding
- Build social identities
- Build capital
- Improve equality

Biological

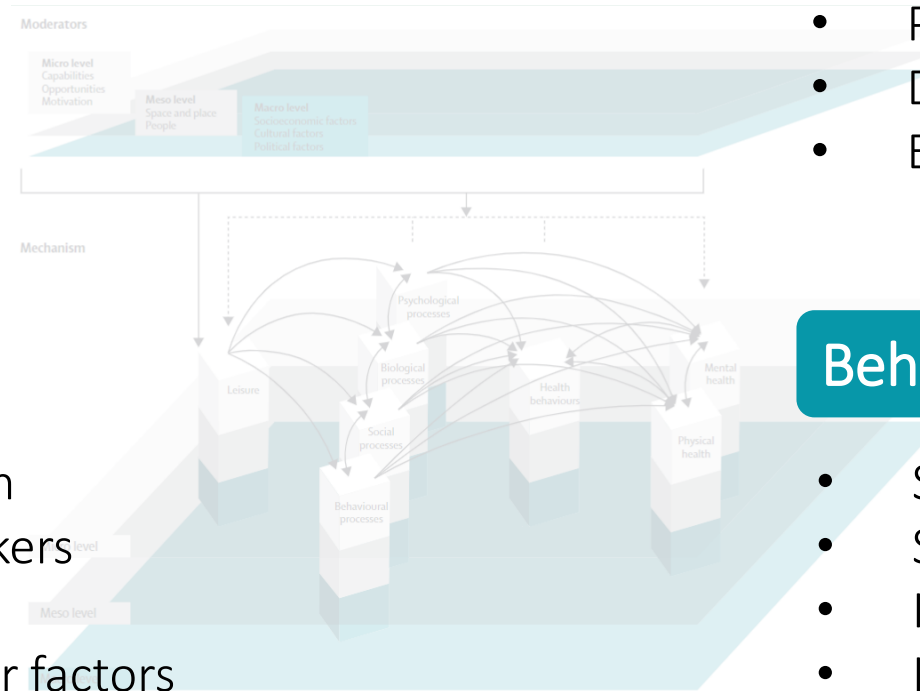
- Increase brain activation
- Modulate brain biomarkers
- Change hormone levels
- Modulate cardiovascular factors
- Improve respiratory function
- Lower pro-inflammatory markers

Psychological

- Support emotional regulation
- Support coping
- Provide meaning and purpose in life
- Develop self-efficacy & self-esteem
- Elicit affective responses

Behavioural

- Support child development
- Support behavioural adjustment
- Increase social control
- Increase health behaviours



Fancourt et al. Lancet Psychia 2020

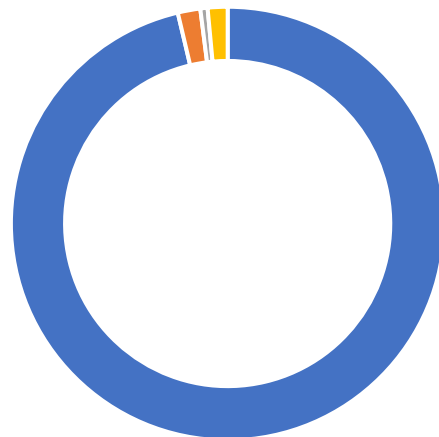
Access to the arts



Socio-economic & demographic barriers

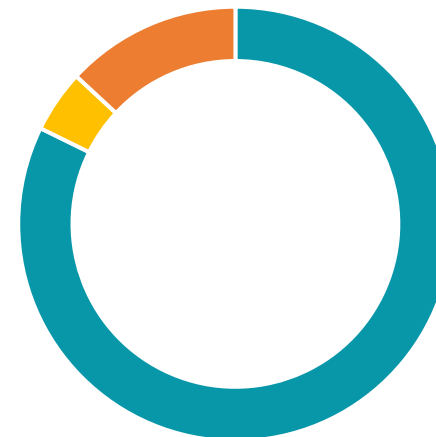
Ethnicity

- White
- Asian/Asian British
- Black/ Black British
- Mixed/ other



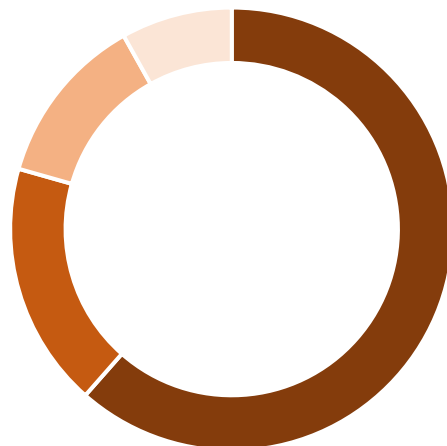
House tenure

- House owner
- Social rent
- Private rent



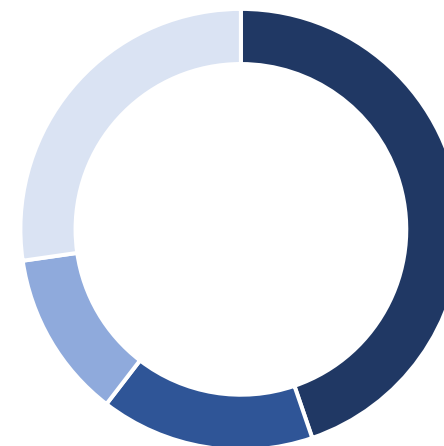
Education level

- University degree
- Advanced
- GCSE
- Other/ no qual.

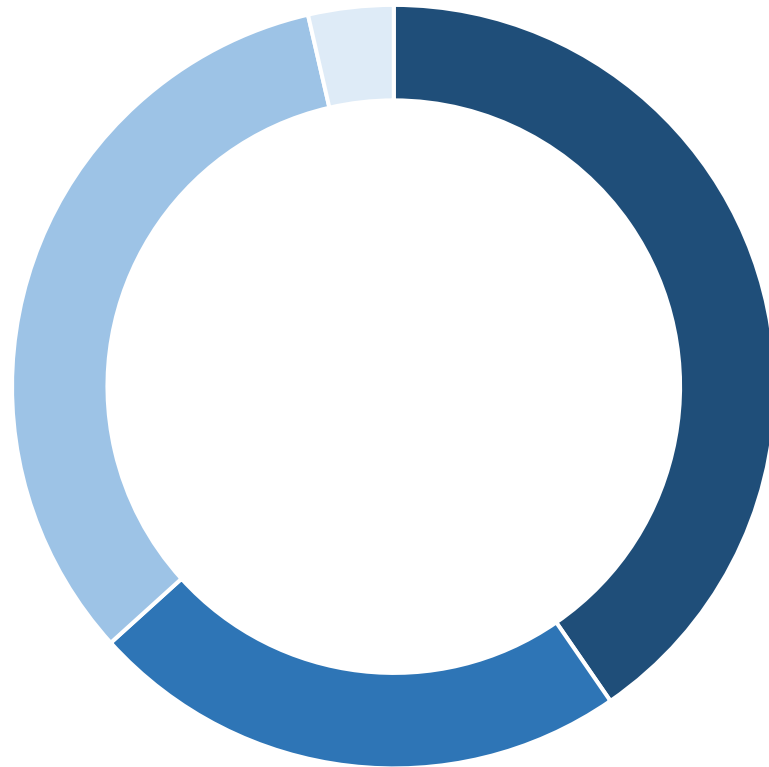


Occupational status

- Managerial/ professional
- Intermediate
- Lower supervisory
- Not employed



Parents' socioeconomic status at age 14

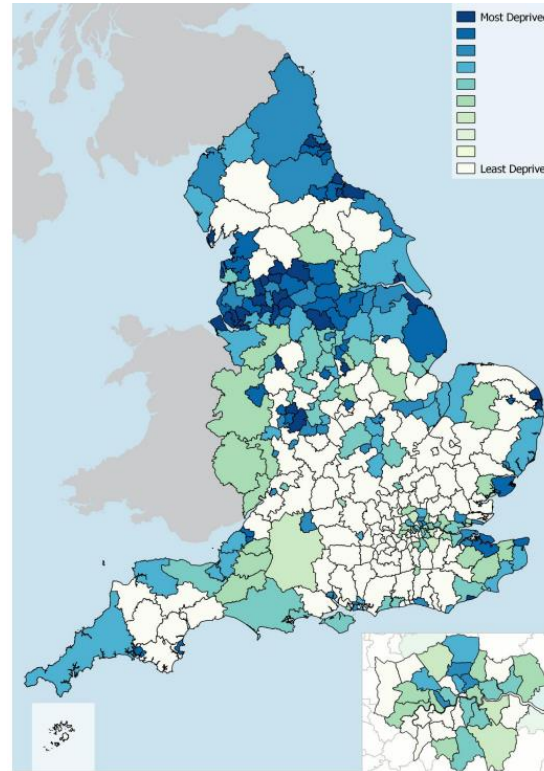
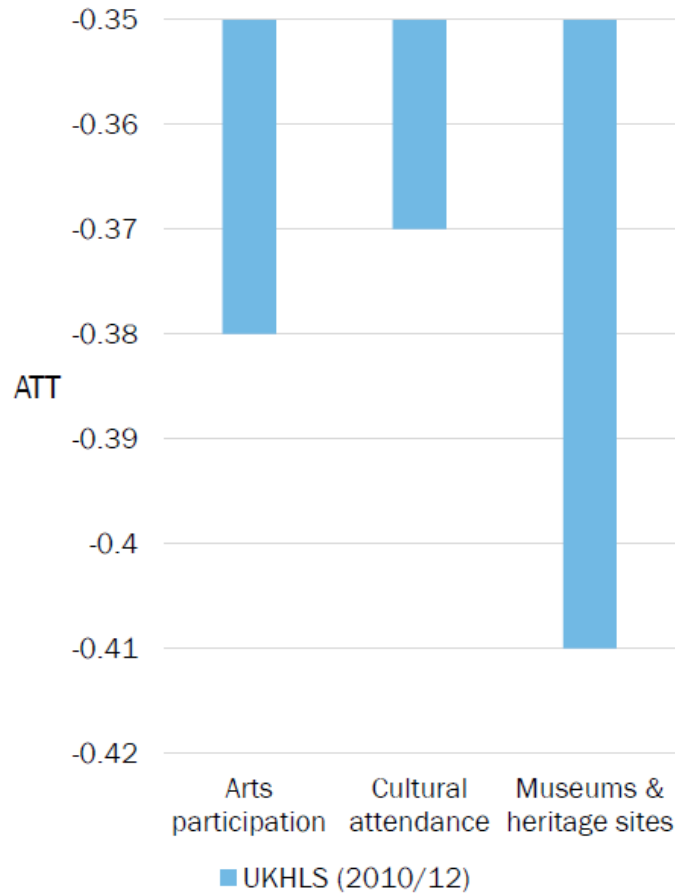


- Managerial/ professional
- Intermediate
- Lower supervisory
- Not employed

	In school			Outside school		
	OR	95%CI	P-value	OR	95%CI	P-value
Model 1						
<i>Sex</i>						
Male	REF			REF		
Female	1.13	0.70 - 1.83	0.624	1.45	1.02 - 2.07	0.041
<i>Ethnicity</i>						
White	REF			REF		
Non-white	1.25	0.68 - 2.28	0.473	0.63	0.38 - 1.06	0.079
<i>Parents' marital status</i>						
Married/in cohabitation	REF			REF		
Single and never married or separated or divorced or widowed	0.54	0.28 - 1.04	0.064	1.28	0.81 - 2.02	0.283
<i>Socio-economic status</i>						
Higher managerial, administrative and professional occupations	REF			REF		
Intermediate occupations	0.88	0.45 - 1.70	0.703	0.57	0.35 - 0.93	0.023
Routine and manual occupations or never worked or long term-unemployed	0.76	0.39 - 1.45	0.398	0.63	0.39 - 1.01	0.054
<i>Parents' working status</i>						
Working full-time/part-time	REF			REF		
Not in employment (including students/retired)	1.24	0.56 - 2.72	0.597	0.74	0.40 - 1.39	0.353
<i>Parents' educational level</i>						
Degree	REF			REF		
No degree	0.82	0.47 - 1.45	0.498	0.71	0.47 - 1.07	0.099
<i>Levels of area deprivation</i>						
30% most deprived	1.22	0.64 - 2.36	0.544	0.73	0.43 - 1.25	0.252
Medium	REF			REF		
30% least deprived	1.38	0.75 - 2.53	0.305	1.00	0.66 - 1.50	0.992
<i>Tenure</i>						
Private rented sector or house owning	REF			REF		
Social rented sector	0.60	0.28 - 1.26	0.179	0.46	0.25 - 0.85	0.013

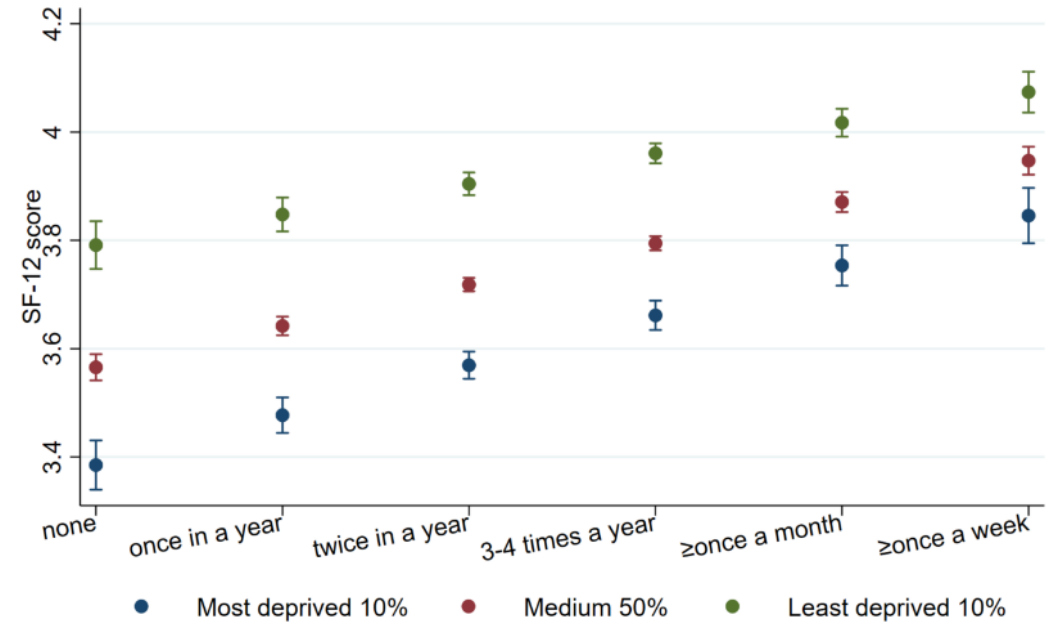
Geographical barriers

Area deprivation: 20% most deprived vs 20% least deprived



Ministry of Housing, Communities, and Local Government 2019

Cultural attendance & mental health functioning by area deprivation level

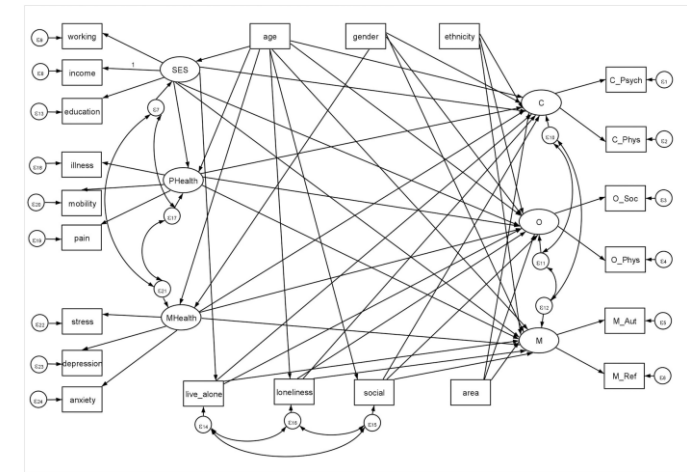


Mak et al. BMJ Open 2021

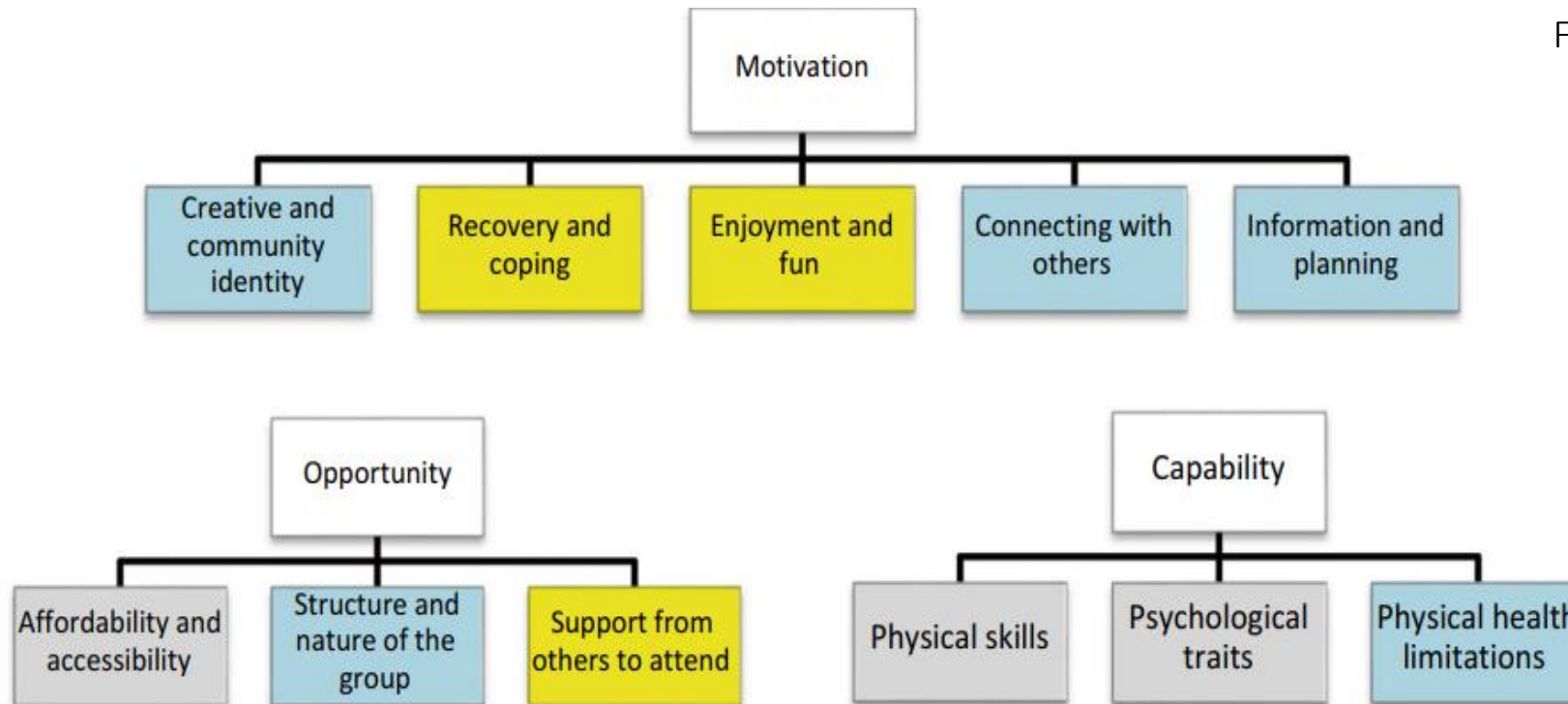
Mak et al. *BMC Public Health*, 2021.

Health barriers

- Poorer physical health is related to **lower perceived capabilities**
- Poorer mental health, depression and anxiety are related to lower perceived capabilities and **motivation**
- Loneliness is related to **fewer opportunities** for them to engage
- Lower levels of happiness is related to lower likelihood of taking part in cultural activities



Fancourt et al. Plos One 2020
 Fancourt et al. BMC Public health 2020
 Fancourt et al. SSM 2021



← Enablers
 ← Barriers
 ← Both

Baxter et al. BMC Psychol 2022

The Impact of Arts and Cultural Engagement on Population Health

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



European Region

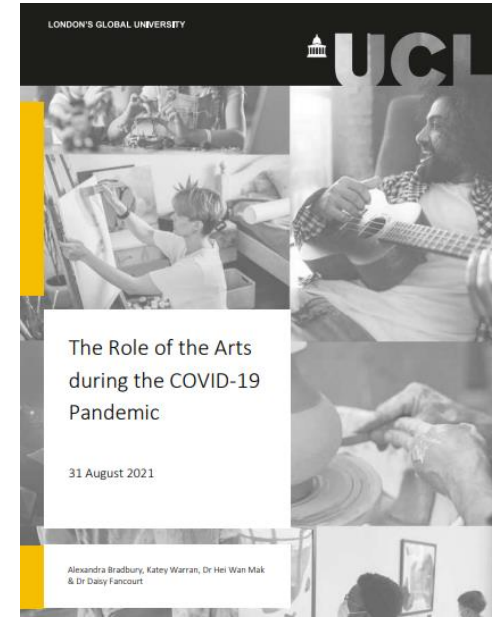
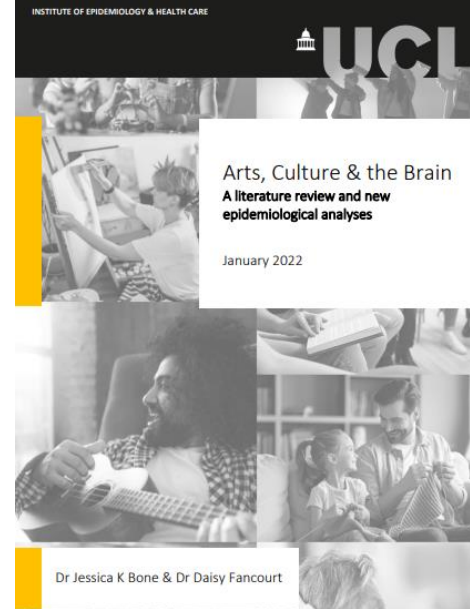
Arts and health:
supporting the mental
well-being of forcibly
displaced people

Reports/ Briefings

Evidence Summary for Policy The role of arts in improving health & wellbeing

Report to the Department for Digital, Culture, Media & Sport
April 2020

Dr Daisy Fancourt, Katey Warran & Henry Aughterson



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The arts in public health policy: progress and opportunities

Rosie Dow, MA • [✉](#) • Katey Warran, PhD • [✉](#) • Pilar Letrondo, MA • Daisy Fancourt, PhD • [Show footnotes](#)



REGIONAL OFFICE FOR
Europe

September 2019

Intersectoral action:
the arts, health and
well-being

Sector brief on
Arts

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