Social & Cultural Engagement and Wellbeing

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wellcome

Background

Mental health, wellbeing and successful ageing

- Depression is associated with a higher risk of dementia, diabetes, cardiovascular disease, stroke, and both specific and all-cause mortality (Cuijpers & Smit, 2002; Knol et al., 2006; Leonard, 2017; Pan, Sun, Okereke, Rexrode, & Hu, 2011; Van der Kooy et al., 2007)
- Low wellbeing is associated with higher inflammation, poorer lung function and premature mortality (Martin-Maria et al. 2017; Steptoe at al., 2015)
- Mental health and wellbeing are prone to decline with age (Colasanti, Marianetti, Micacchi, Amabile, & Mina, 2010)
- Mental health problems in older age are commonly under-diagnosed and under-treated (Rodda, Walker, & Carter, 2011)

Protective factors

Factors that can support wellbeing & protect against depression, include:

- Cognitive stimulation (Wang & Blazer, 2015)
- Physical activity (Orgeta, Brede, & Livingston, 2017)
- Social engagement and support (Gariépy, Honkaniemi, & Quesnel-Vallée, 2016)

Community Assets

40,000 choirs
11,000 amateur orchestras
50,000 amateur arts groups
5,000 amateur theatre societies
3,000 dance groups
2,500 museums
400 historic places
4,000 libraries
1,300 theatres
50,000 book clubs
27,000 public parks
1,000 community gardens
6,500 leisure centres
10,000 village halls
330,000 allotments
161,000 voluntary associations
160,000 community groups

=c.1 million

Background



Active cultural engagement



Receptive cultural engagement

Cultural Engagement

Background


Cultural engagement
Reduced sedentary behaviours
Social support
Reduced loneliness
Emotional expression
Cognitive stimulation
Opportunity for agency
Opportunity to learn
Stress reduction
Hedonic experiences
Mindfulness
Prosocial behaviour modelling

Background



Active cultural engagement



Receptive cultural engagement

Studies on wellbeing
- Perkins & Williamon, 2014
- Noice, Noice & Staines, 2004
- Ascenso, Perkins, Fancourt et al., 2018

Studies on depression
- Cohen, Perlstein, Chapline, & Simmens, 2006
- Coulton, Clift, Skingley, & Rodriguez, 2015
- Fancourt & Perkins, 2018

Studies on wellbeing
- Thomson & Chatterjee, 2016
- Noice, Noice & Staines, 2004

Studies on depression
- Morse, Thomson, Brown, & Chatterjee, 2015
- Solway, Thompson, Camic, & Chatterjee, 2015

Study 1:

What longevity of cultural engagement is required to positively affect wellbeing?

Methods

Dataset

English Longitudinal Study of Ageing, Wave 2 (2004/5) to Wave 7 (2014/2015)

Cultural engagement

Receptive cultural engagement - frequency of visiting:

- The theatre, concert or opera
- The cinema
- An art gallery, exhibition or museum

[never, less than once a year, once or twice a year, every few months, once a month or more]

Wellbeing

- Experienced wellbeing – pleasure sub-domain of CASP-19
- Evaluative wellbeing – 5-item Diener's Life Satisfaction scale
- Eudemonic wellbeing – self-realisation and control-autonomy subdomains of CASP-19

Methods

Inclusion

- Adults aged 50+
- Not registered blind
- Provided data at minimum of 4 waves from wave 2 to wave 7 (n=2,767)
- Multiple imputation used to account for missing baseline covariate data

Total n=3,188

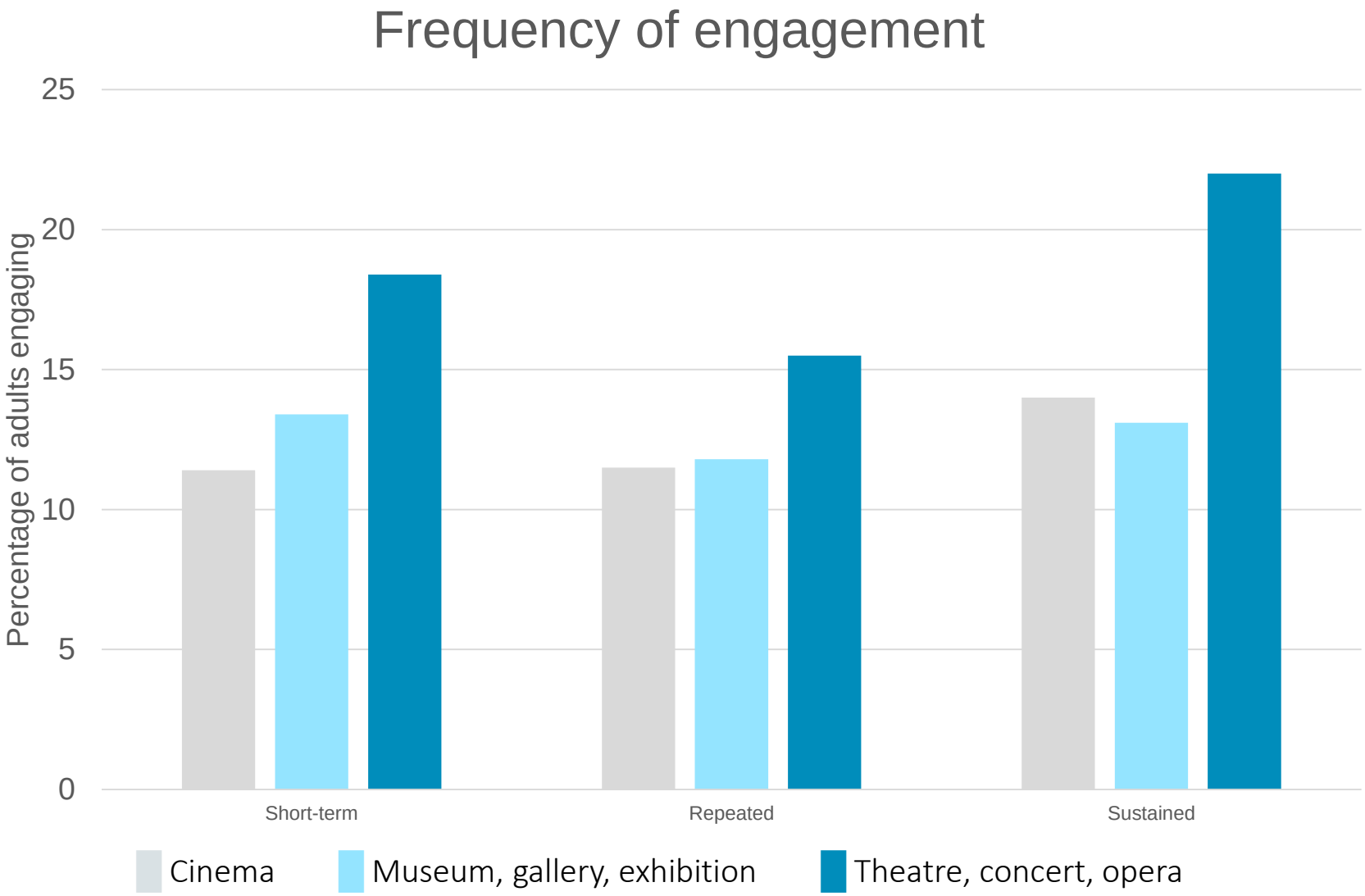
Analyses

Linear and logistic regression analyses (B coeff/ORs with 95% CIs)

Comparison of short-term engagement [engagement recorded at one wave]
repeated engagement [engagement recorded at 2-3 waves]
sustained engagement [engagement recorded at 4-6 waves]

Covariates: Baseline wellbeing
+ socio-demographic covariates (age, gender, ethnicity, marital status, SES, employment, wealth)
+ health covariates (longstanding illness, eyesight, hearing, chronic pain)
+ social covariates (freq of social contact, civic engagement: political party, neighbourhood group, church, charity involvement, evening classes, social club, exercise class, sports group, society).

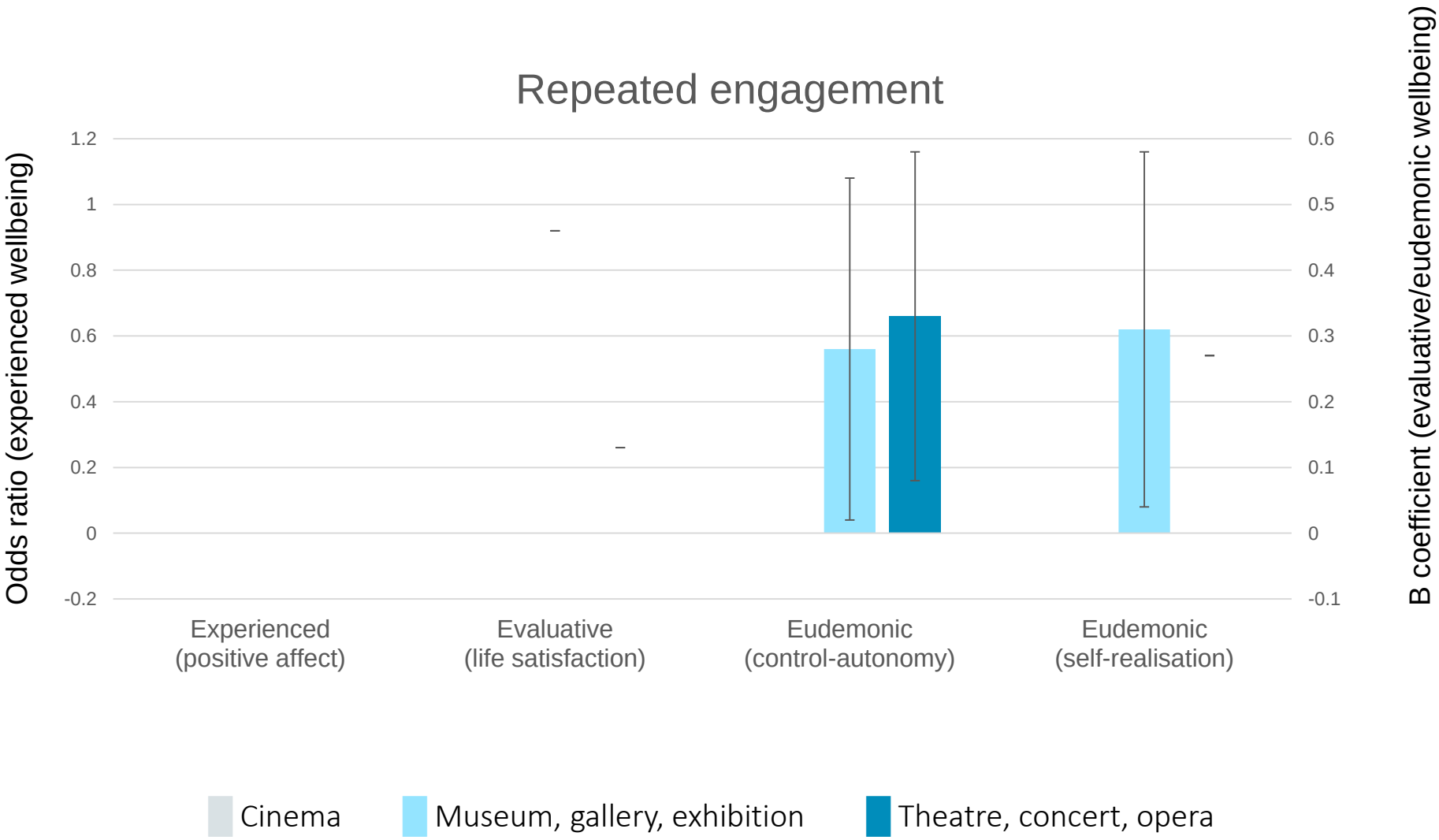
Results


Frequency of engagement
Percentage of adults engaging
25
20
15
10
5
0
Short-term
Repeated
Sustained
Cinema
Museum, gallery, exhibition
Theatre, concert, opera

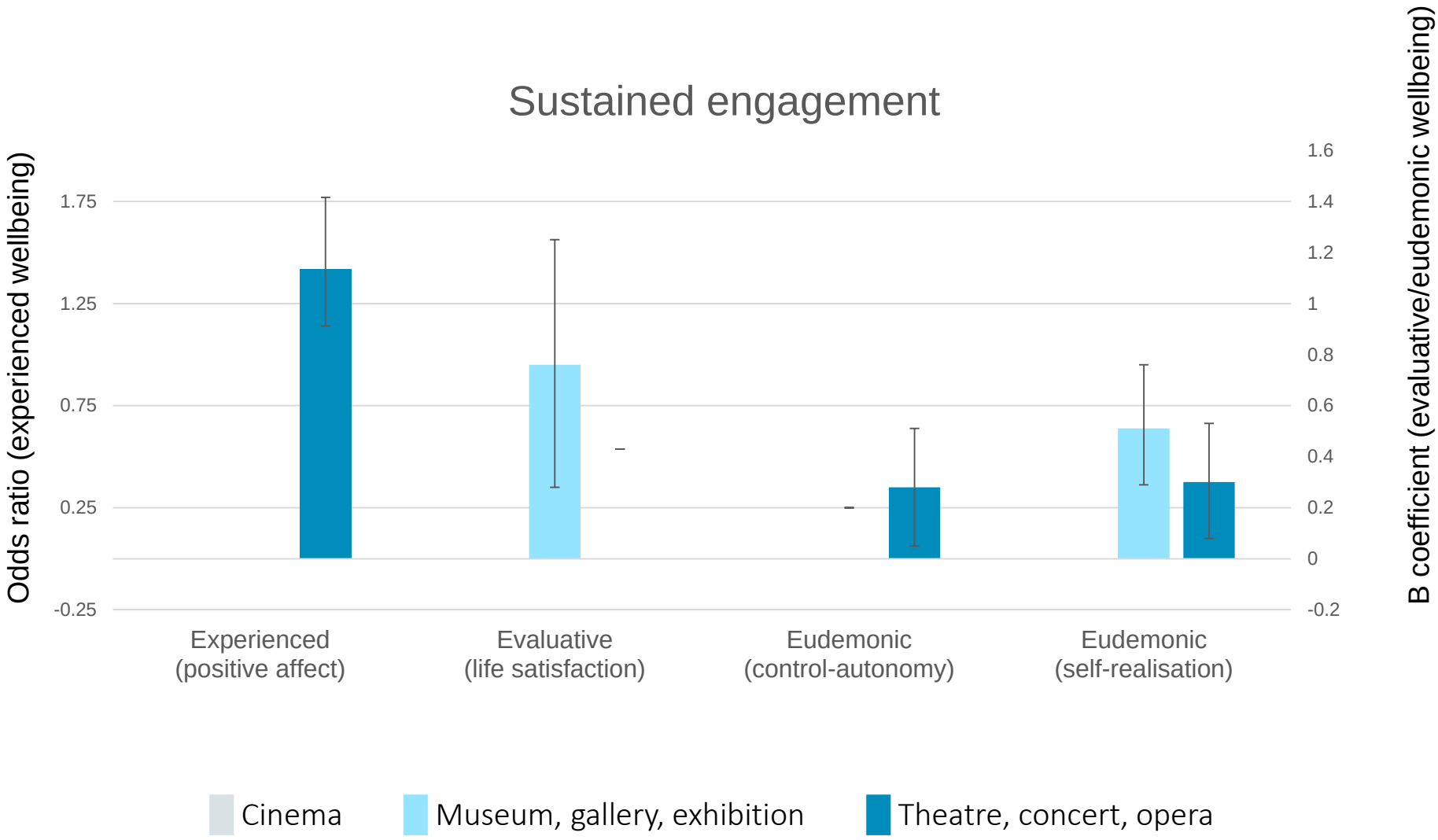
Results


Short-term engagement
Odds ratio (experienced wellbeing)
B coefficient (evaluative/eudemonic wellbeing)
1.5
1
0.5
0
-0.5
-1
0.4
0.3
0.2
0.1
0
-0.1
-0.2
-0.3
Experienced (positive affect)
Evaluative (life satisfaction)
Eudemonic (control-autonomy)
Eudemonic (self-realisation)
Cinema
Museum, gallery, exhibition
Theatre, concert, opera

Results


Repeated engagement
Odds ratio (experienced wellbeing)
B coefficient (evaluative/eudemonic wellbeing)
1.2
1
0.8
0.6
0.4
0.2
0
-0.2
0.6
0.5
0.4
0.3
0.2
0.1
0
-0.1
Experienced (positive affect)
Evaluative (life satisfaction)
Eudemonic (control-autonomy)
Eudemonic (self-realisation)
Cinema
Museum, gallery, exhibition
Theatre, concert, opera

Results


Sustained engagement
Odds ratio (experienced wellbeing)
B coefficient (evaluative/eudemonic wellbeing)
1.75
1.25
0.75
0.25
-0.25
1.6
1.4
1.2
1
0.8
0.6
0.4
0.2
0
-0.2
Experienced (positive affect)
Evaluative (life satisfaction)
Eudemonic (control-autonomy)
Eudemonic (self-realisation)
Cinema
Museum, gallery, exhibition
Theatre, concert, opera

Conclusions

Findings

Short-term cultural engagement not longitudinally associated with wellbeing

Repeated cultural engagement → enhanced eudemonic wellbeing

Sustained cultural engagement → enhanced eudemonic and hedonic wellbeing

Finding was independent of socio-demographic factors, health and behavioural factors, and other forms of social and civic engagement.

→ Cultural engagement is a 'perishable commodity'

Literature comparison

- Previous studies:
  - Proposed 'perishable' association with wellbeing (Johansson et al., 2001)

- First known longitudinal study comparing different types of cultural engagement and confirming perishable associations

Study 2:

Can cultural engagement reduce the risk of developing depression?

Background



Active cultural engagement



Receptive cultural engagement

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Studies on depression
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Background



Active cultural engagement



Receptive cultural engagement

PREVENTION		
Primary	**Secondary**	**Tertiary**
Before condition occurs	During development of condition	After condition has occured

Health ← → **Disease**

Background



Active cultural engagement



Receptive cultural engagement

	PREVENTION		
Primary	**Secondary**	**Tertiary**
Before condition occurs	During development of condition	After condition has occured

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Methods

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Receptive cultural engagement - frequency of visiting:

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Depression

Index of:

- Score of 3+ on 8-item Centre for Epidemiologic Studies Depression Scale (CES-D) during follow-up
- Doctor diagnosis in the two years between each wave

Methods

Inclusion

- Adults aged 50+
- Not registered as blind
- Below-threshold depression symptoms at baseline (CES-D)
- Not taken anti-depressants in 2 years prior to baseline
- Not had counselling for depression in 2 years prior to baseline
- No ongoing or recent (past 2 years) diagnosis of any other psychiatric condition

Total n=2,148

Analyses

Incidence rates of depression computed per 100-person years

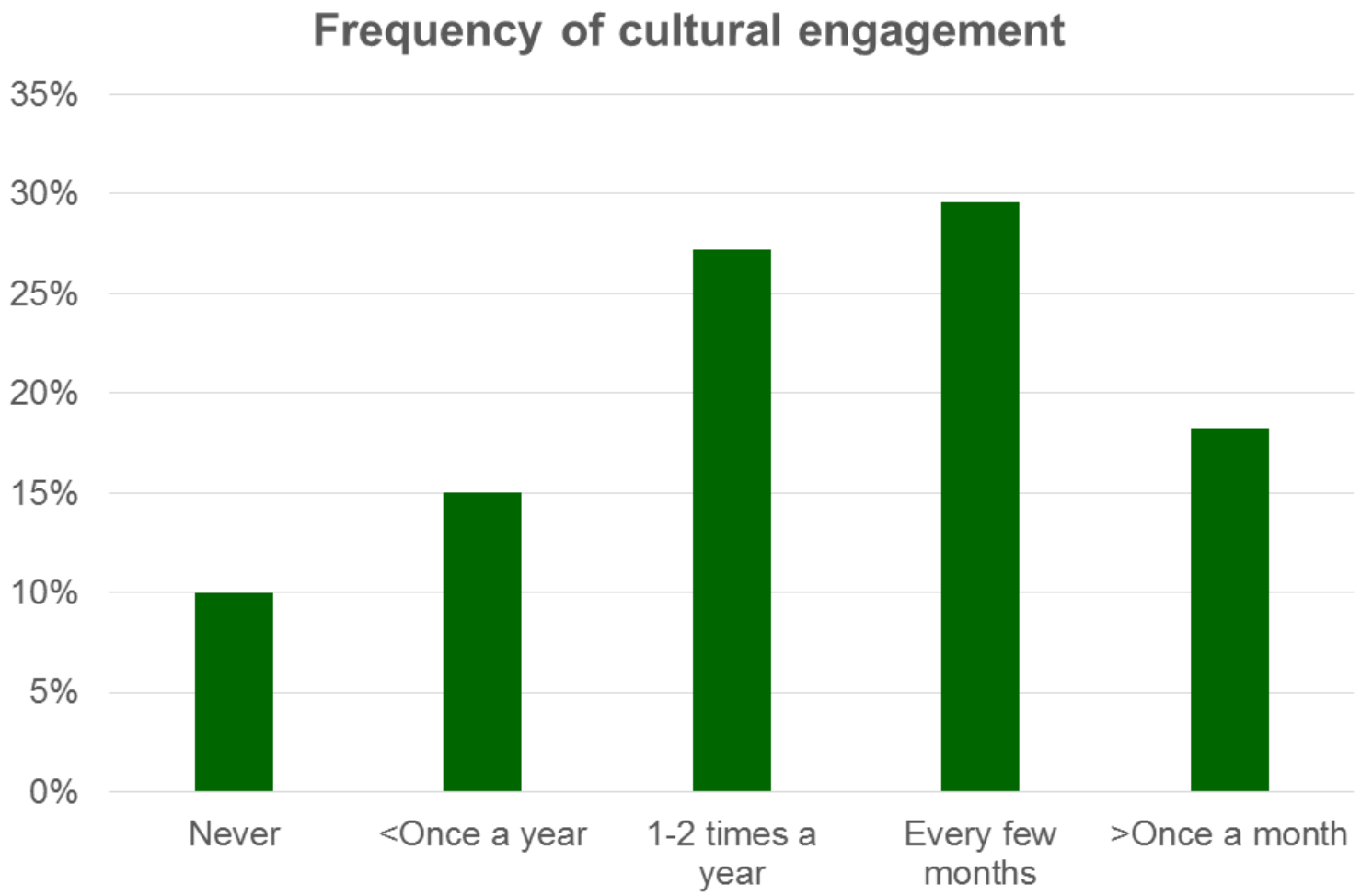
Logistic regression analyses (ORs with 95% CIs)

Model 1: Baseline depressive symptoms + socio-demographic covariates
(age, gender, ethnicity, marital status, education, employment, wealth)

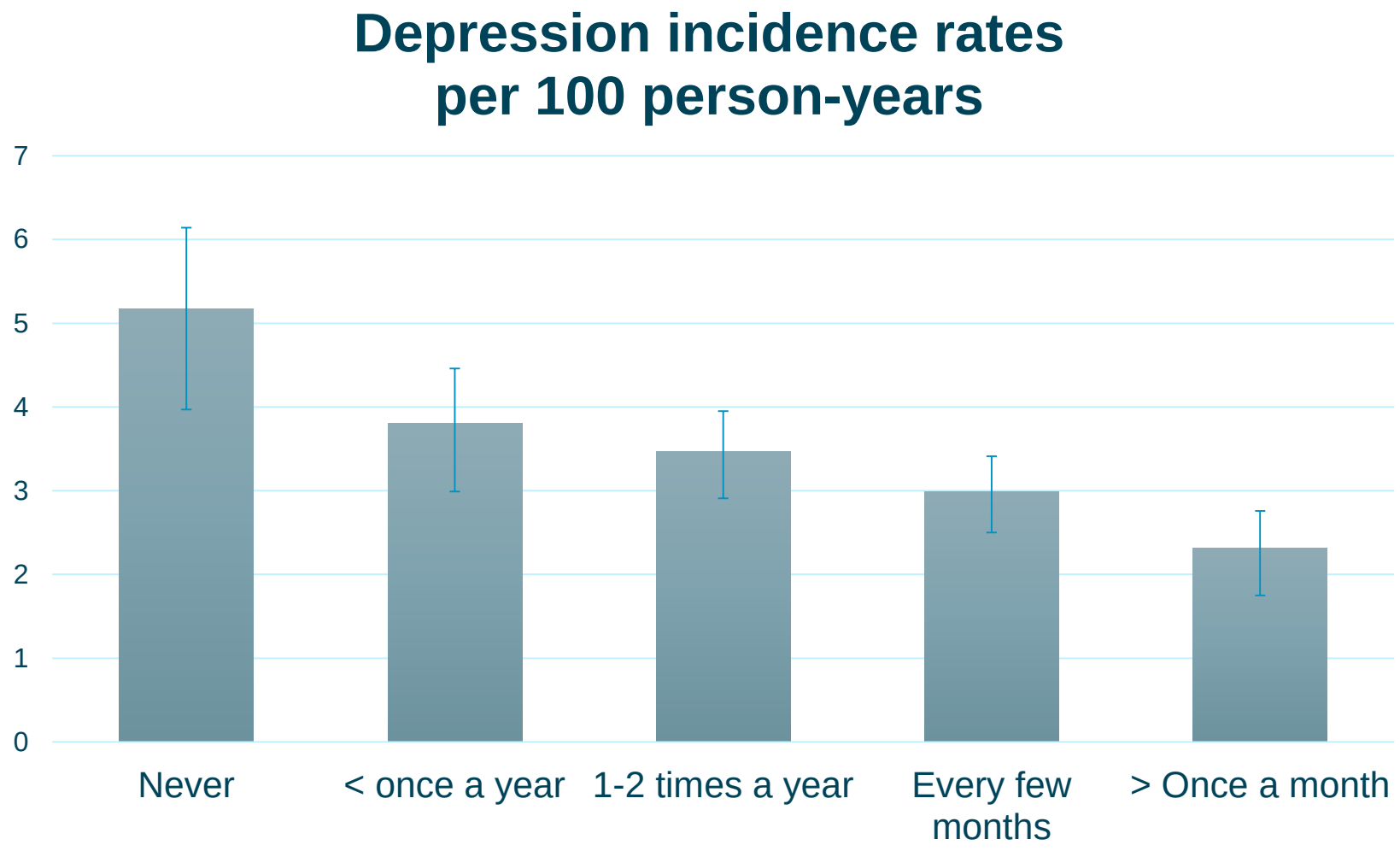
Model 2: Model 1 + health covariates
(longstanding illness, CVD, eyesight, hearing, chronic pain, alcohol consumption)

Model 3: Model 2 + social covariates
(freq of social contact, civic engagement: political party, neighbourhood group, church, charity involvement, evening classes, social club, exercise class, sports group, society, having a hobby, reading).

Results

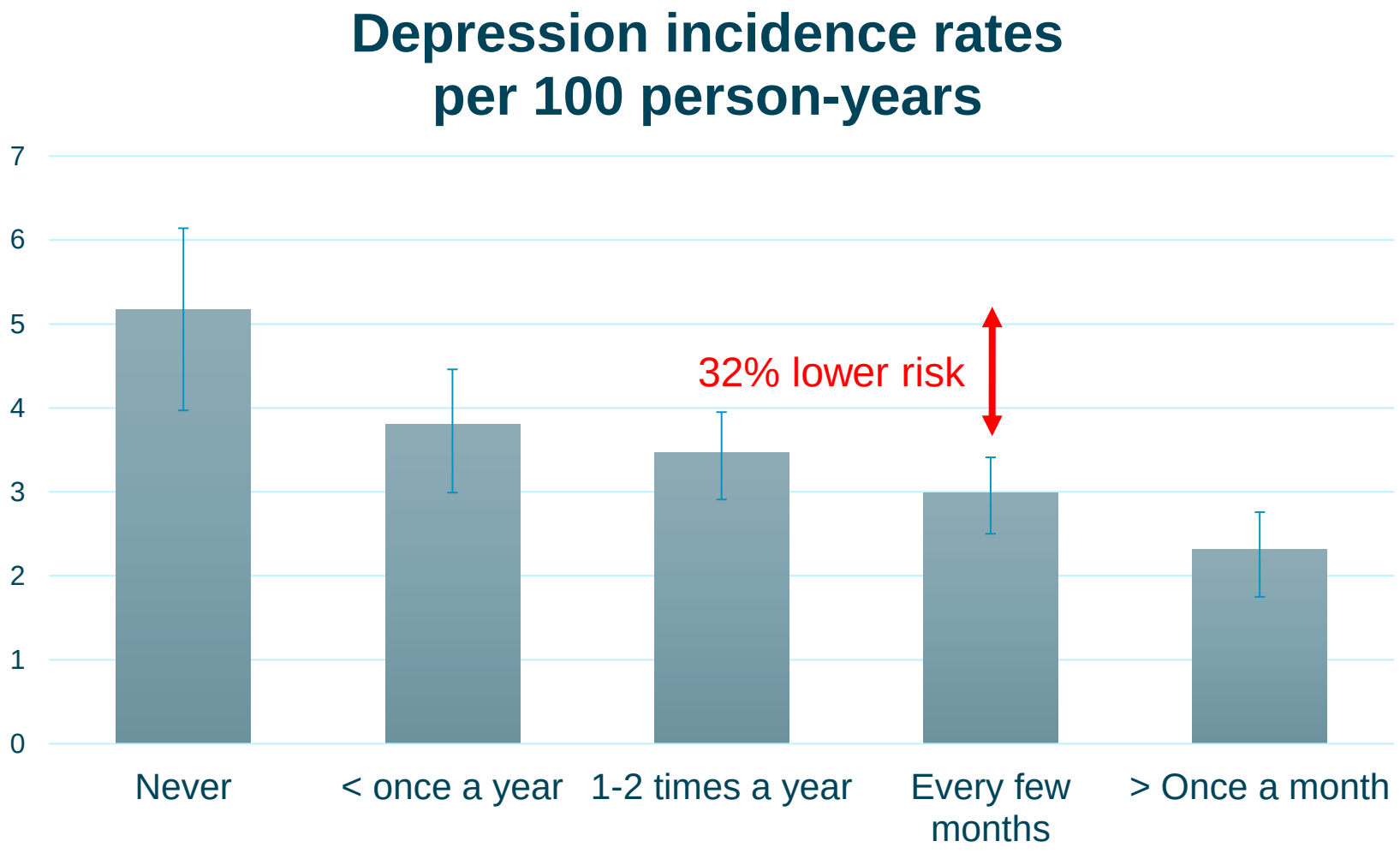

Frequency of cultural engagement
35%
30%
25%
20%
15%
10%
5%
0%
Never
<Once a year
1-2 times a year
Every few months
>Once a month

Results



n=616 cases detected in follow-up

Results



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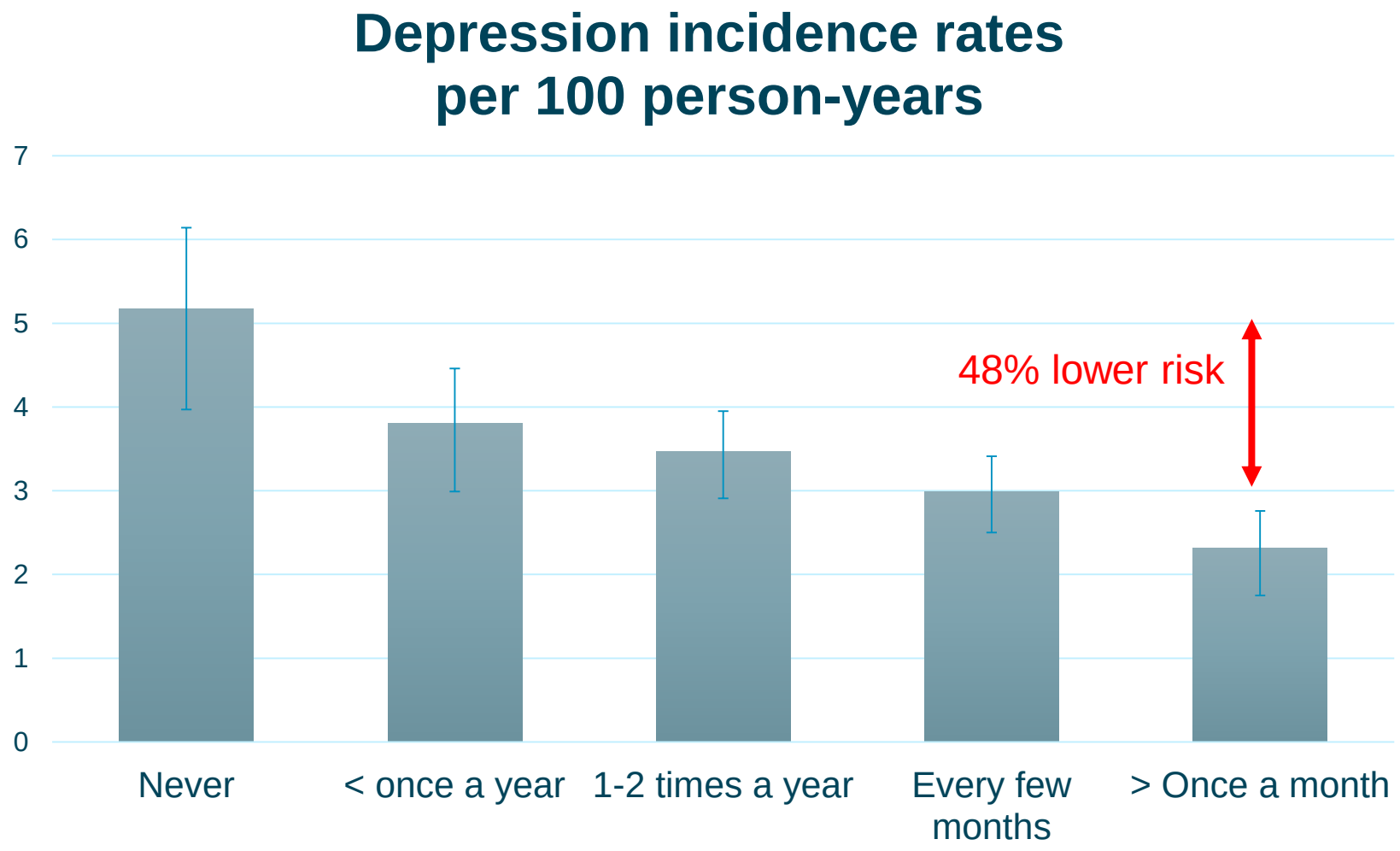

n=616 cases detected in follow-up

Results

Main analyses

	Model 1			Model 2			Model 3		
	OR	95% CI	p	OR	95% CI	p	OR	95% CI	p
Never	REF			REF			REF		
≤Once a year	0.77	0.53-1.13	.19	0.80	0.54-1.18	.26	0.80	0.54-1.19	.27
Once or twice a year	0.71	0.50-1.01	.060	0.75	0.52-1.07	.10	0.74	0.51-1.06	.10
Every few months	**0.65**	**0.45-0.93**	**.018**	**0.69**	**0.48-1.00**	**.048**	**0.68**	**0.47-0.99**	**.046**
≥Once a month	**0.49**	**0.32-0.73**	**.001**	**0.52**	**0.34-0.79**	**.002**	**0.52**	**0.34-0.80**	**.003**

Model 1 adjusted for
- Baseline depressive symptoms
- Age
- Sex
- Marital status
- Ethnicity
- Educational attainment
- Employment status
- Wealth

N=2,148

Model 2 additionally adjusted for
- Eyesight
- Hearing
- Chronic health conditions
- Pain
- Alcohol consumption

Model 3 additionally adjusted for
- Social networks
- Civic engagement
- Having hobby or pastime
- Reading a daily newspaper

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N=2,148

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- Eyesight
- Hearing
- Chronic health conditions
- Pain
- Alcohol consumption

Model 3 additionally adjusted for
- Social networks
- Civic engagement
- Having hobby or pastime
- Reading a daily newspaper

Sensitivity analyses

Main analyses

	Model 1			Model 2			Model 3		
	OR	95% CI	p	OR	95% CI	p	OR	95% CI	p
Never	REF			REF			REF		
≤Once a year	0.77	0.53-1.13	.19	0.80	0.54-1.18	.26	0.80	0.54-1.19	.27
Once or twice a year	0.71	0.50-1.01	.060	0.75	0.52-1.07	.10	0.74	0.51-1.06	.10
Every few months	**0.65**	**0.45-0.93**	**.018**	**0.69**	**0.48-1.00**	**.048**	**0.68**	**0.47-0.99**	**.046**
≥Once a month	**0.49**	**0.32-0.73**	**.001**	**0.52**	**0.34-0.79**	**.002**	**0.52**	**0.34-0.80**	**.003**

Sensitivity analyses 1

	Weighted to account for missing data			Adjusting for open personality			Showing >1 subclinical symptom at baseline		
	OR	95% CI	p	OR	95% CI	p	OR	95% CI	p
Never	REF			REF			REF		
≤Once a year	0.81	0.54-1.21	.30	0.74	0.49-1.12	.15	0.74	0.49-1.12	.15
Once or twice a year	0.72	0.49-1.05	.087	0.73	0.50-1.07	.10	0.68	0.46-1.00	.050
Every few months	0.71	0.48-1.05	.087	0.69	0.47-1.02	.064	**0.64**	**0.42-0.95**	**.028**
≥Once a month	**0.53**	**0.34-0.83**	**.005**	**0.53**	**0.34-0.82**	**.005**	**0.52**	**0.33-0.82**	**.005**

Sensitivity analyses

Main analyses

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≥Once a month	**0.49**	**0.32-0.73**	**.001**	**0.52**	**0.34-0.79**	**.002**	**0.52**	**0.34-0.80**	**.003**

Sensitivity analyses 2

	Excluded if developed depression in next 2 yrs			Left-censoring bias: incl baseline depression			Using alternative 4+ CES-D cut-off		
	OR	95% CI	p	OR	95% CI	p	OR	95% CI	p
Never	REF			REF			REF		
≤Once a year	0.82	0.53-1.27	.38	0.84	0.59-1.21	.35	0.72	0.47-1.11	.14
Once or twice a year	0.75	0.50-1.12	.16	0.72	0.52-1.01	.060	0.69	0.46-1.04	.075
Every few months	0.67	0.44-1.02	.064	**0.66**	**0.47-0.94**	**.021**	0.67	0.44-1.01	.058
≥Once a month	**0.58**	**0.36-0.93**	**.024**	**0.57**	**0.38-0.84**	**.005**	**0.58**	**0.37-0.94**	**.025**

Conclusions

Findings

Cultural engagement every few months or more appears to be protective against developing depression.

Dose-response relationship amongst adults who were free from depression at baseline.

Finding was independent of socio-demographic factors, health and behavioural factors, and other forms of social and civic engagement.

Literature comparison

- Previous studies:
  - Found cross-sectional associations between cultural engagement and depression (Cuypers et al., 2012)
- First known longitudinal study on depression prevention and cultural engagement

Conclusions

Strengths

- Used data from a large nationally-representative cohort study
- Consistent collection of key variables every 2 years and a follow-up of a decade
- Used well-validated measures of depression & wellbeing
- Tested different thresholds for depression, finding consistent results
- Included all identified confounding variables
- Tested a range of sensitivity analyses against different potential biases

Limitations

- Observational rather than interventional. Causality cannot be assumed
- Potential remaining residual confounders
- Possible that cultural engagement was still a proxy for another factor (e.g. SES)

Study 3:

Does SES underlie associations between cultural engagement and mental health?

Methods

Inclusion

- Adults aged 50+ included in Wave 2 core sample

  Total n=8,780

Analyses

Propensity matching (logit model) for each individual

Based on age, sex, employment, educational attainment and wealth

Nearest-available Mahalanobis metric 1-to-1 matching without replacement (caliper .001)

Rubin's B<25, Rubin's R 0.5-2, percentage bias <10% for each covariate

Total n=4,726 participants (2,363 pairs)

Methods

Propensity score matching analysis

	Pre-matching N=8,780	Post-matching N=4,726 (2,363 pairs)
Age	**<.001**	.63
Sex	**.003**	.32
Employment status	**<.001**	.86
Educational attainment	**<.001**	.32
Wealth	**<.001**	.56

Methods

Propensity score matching analysis

	Pre-matching N=8,780	Post-matching N=4,726 (2,363 pairs)
Age	**<.001**	.63
Sex	**.003**	.32
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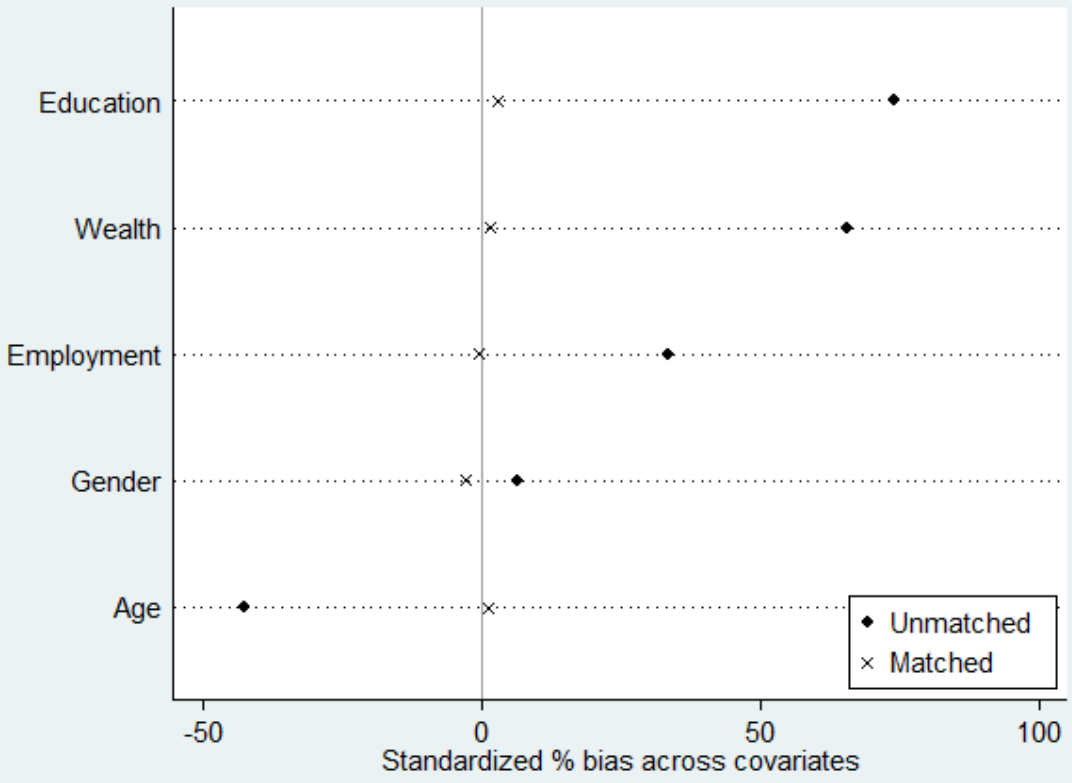

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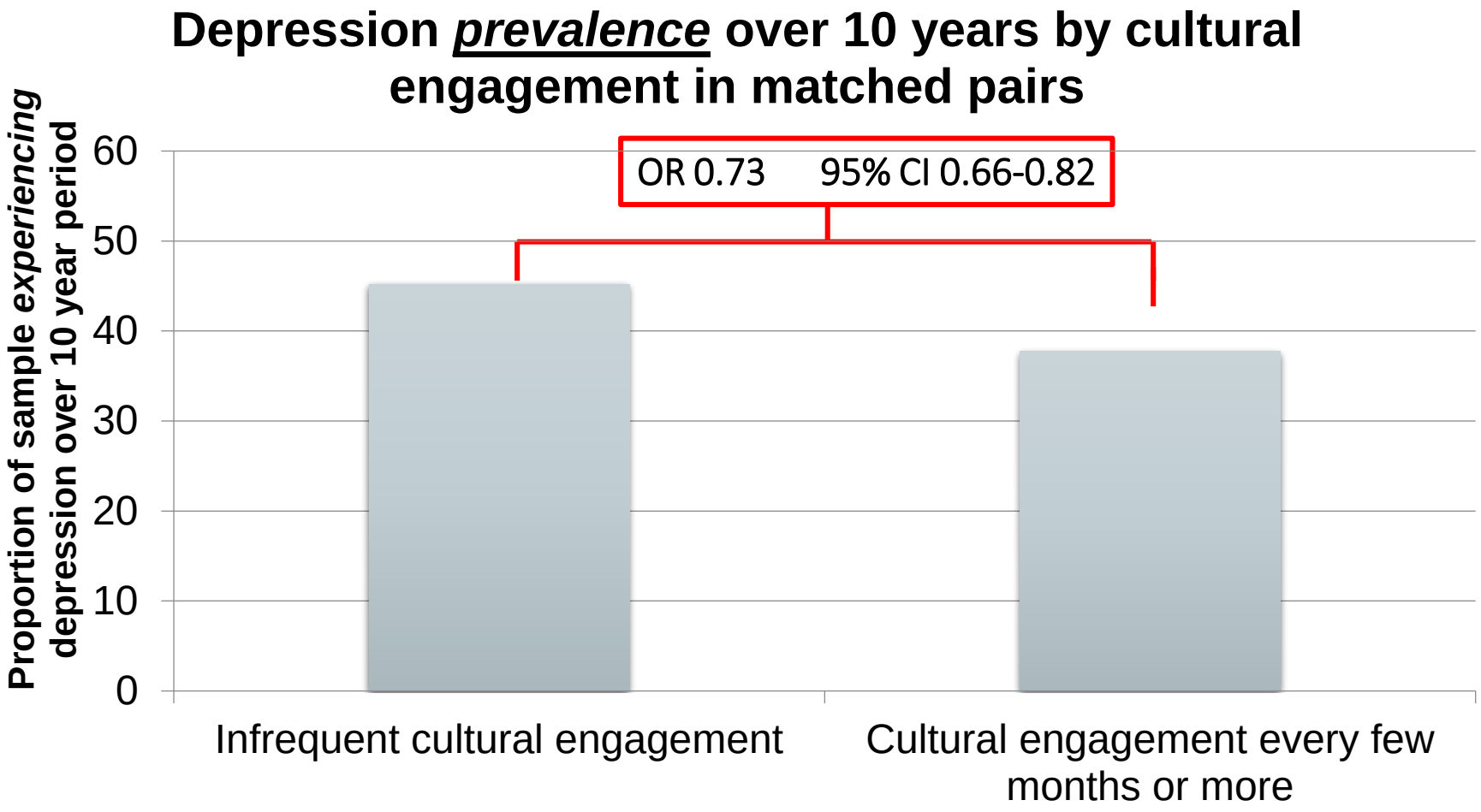
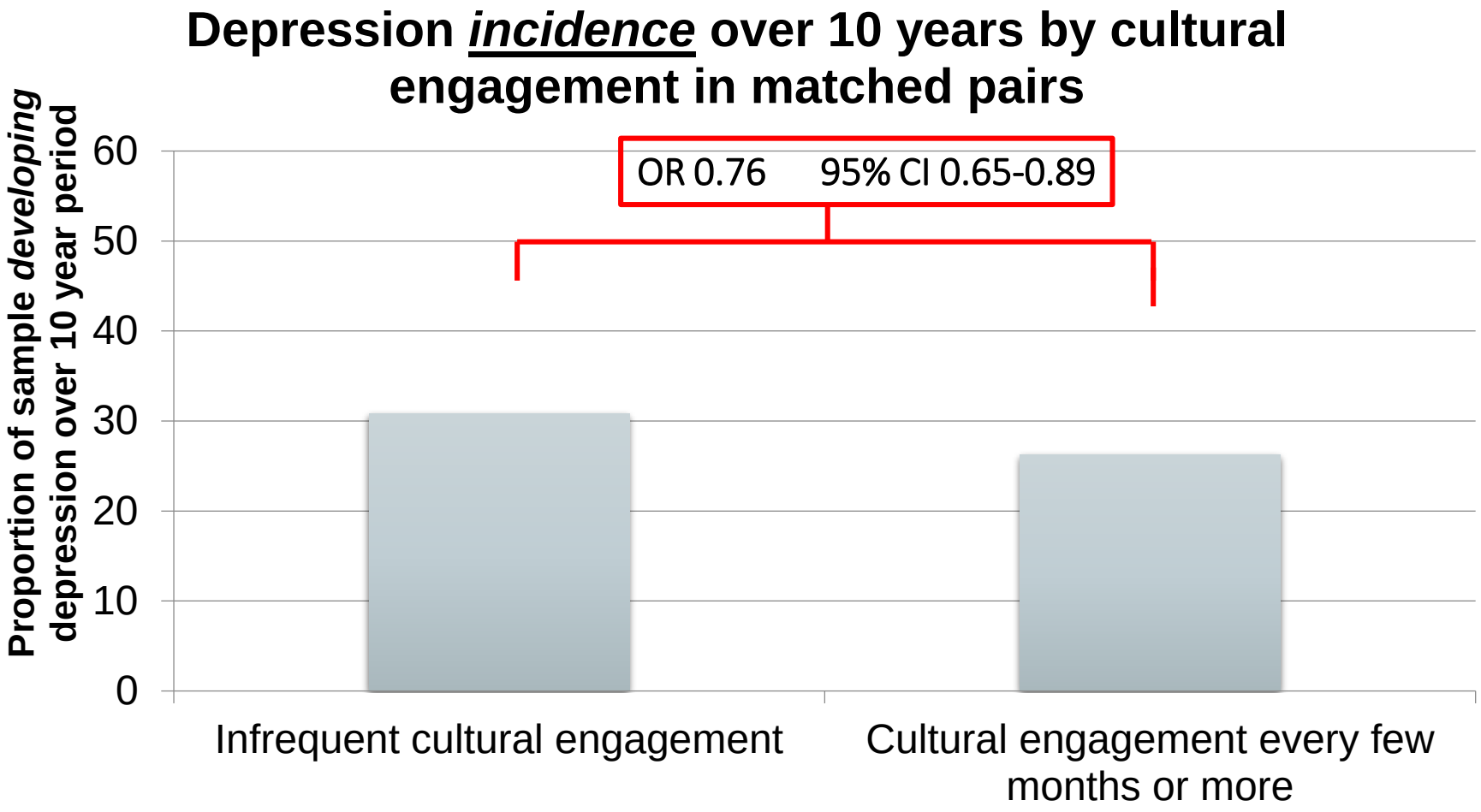


N=4,726 (2,363 pairs)

Results



N=3,184 (1,592 pairs)

Conclusions

- Cultural engagement is associated with both wellbeing and a lower risk of developing depression in older age.
- Effects do not seem to be merely a function of SES
- Association may be ascribed to multiple components of cultural engagement
- Supports current social prescribing schemes
- Calls for using cultural venues as sites for health promotion/public health interventions (Camic & Chatterjee, 2013)

Community Assets

40,000 choirs
11,000 amateur orchestras
50,000 amateur arts groups
5,000 amateur theatre societies
3,000 dance groups
2,500 museums
400 historic places
1,300 theatres
800 cinemas
4,000 libraries
50,000 book clubs
27,000 public parks
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6,500 leisure centres
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161,000 voluntary associations
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=c.1 million

Social & Cultural Engagement and Wellbeing

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