Social & Cultural Engagement and Wellbeing

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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

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

- Short-term: Cinema 10%, Museum, gallery, exhibition 15%, Theatre, concert, opera 20%
- Repeated: Cinema 12%, Museum, gallery, exhibition 19%, Theatre, concert, opera 22%
- Sustained: Cinema 13%, Museum, gallery, exhibition 14%, Theatre, concert, opera 23%
Results

Short-term engagement

Odds ratio (experienced wellbeing)

B coefficient (evaluative/eudemonic wellbeing)

- 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)

Experienced (positive affect)

Evaluative (life satisfaction)

Eudemonic (control-autonomy)

Eudemonic (self-realisation)

-0.2 0 0.2 0.4 0.6 0.8 1 1.2

-0.1 0 0.1 0.2 0.3 0.4 0.5 0.6

Cinema

Museum, gallery, exhibition

Theatre, concert, opera
Results

Sustained engagement

Odds ratio (experienced wellbeing)

B coefficient (evaluative/eudemonic wellbeing)

- Experienced (positive affect)
- Evaluative (life satisfaction)
- Eudemonic (control-autonomy)
- Eudemonic (self-realisation)

Cinema  Museum, gallery, exhibition  Theatre, concert, opera
Findings

*Short-term* cultural engagement not longitudinally associated with wellbeing

*Repeated* cultural engagement $\rightarrow$ enhanced eudemonic wellbeing

*Sustained* cultural engagement $\rightarrow$ enhanced eudemonic and hedonic wellbeing

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

$\rightarrow$ 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

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

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Active cultural engagement

Receptive cultural engagement

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</tr>
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<tbody>
<tr>
<td>Primary</td>
</tr>
<tr>
<td>Before condition occurs</td>
</tr>
<tr>
<td>Secondary</td>
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<tr>
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<td>Tertiary</td>
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<tr>
<td>After condition has occurred</td>
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</table>

Health

Disease
### Background

#### Active cultural engagement

#### Receptive cultural engagement

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**PREVENTION**

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**Health** → **Disease**
Methods

Dataset

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]

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

- Never: 10%
- <Once a year: 20%
- 1-2 times a year: 25%
- Every few months: 30%
- >Once a month: 15%
Results

Depression incidence rates per 100 person-years

- Never: 5.5
- < once a year: 4.2
- 1-2 times a year: 3.1
- Every few months: 2.7
- > Once a month: 2.3

n=616 cases detected in follow-up
Results

Depression incidence rates per 100 person-years

- Never: 32% lower risk
- < once a year
- 1-2 times a year
- Every few months
- > Once a month

n=616 cases detected in follow-up
Results

Depression incidence rates per 100 person-years

- Never: 5.0 cases
- < once a year: 4.0 cases
- 1-2 times a year: 3.5 cases
- Every few months: 3.0 cases
- > Once a month: 2.5 cases

48% lower risk

n=616 cases detected in follow-up
## Results

### Main analyses

<table>
<thead>
<tr>
<th></th>
<th>Model 1</th>
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Model 1 adjusted for:
- Baseline depressive symptoms
- Age
- Sex
- Marital status
- Ethnicity
- Educational attainment
- Employment status
- Wealth

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

\( N=2,148 \)
### Results

#### Main analyses

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*Main analyses N=2,148*
### Results

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- Eyesight
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*N=2,148*
## Results

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- Social networks
- Civic engagement
- Having hobby or pastime
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*N=2,148*
### Sensitivity analyses

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#### Sensitivity analyses 1

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<th>Weighted to account for missing data</th>
<th>Adjusting for open personality</th>
<th>Showing &gt;1 subclinical symptom at baseline</th>
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### Sensitivity analyses 2

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<th>Excluded if developed depression in next 2 yrs</th>
<th>Left-censoring bias: incl baseline depression</th>
<th>Using alternative 4+ CES-D cut-off</th>
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<td>Once or twice a year</td>
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<td>.024</td>
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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

<table>
<thead>
<tr>
<th></th>
<th>Pre-matching N=8,780</th>
<th>Post-matching N=4,726 (2,363 pairs)</th>
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<tbody>
<tr>
<td>Age</td>
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<td>Wealth</td>
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Methods

Propensity score matching analysis

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Results

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

OR 0.73  95% CI 0.66-0.82

N=4,726 (2,363 pairs)
Results

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

- Infrequent cultural engagement
- Cultural engagement every few months or more

Proportion of sample developing depression over 10 year period

OR 0.76  95% CI 0.65-0.89

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

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<td>amateur theatre societies</td>
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=c.1 million
Social & Cultural Engagement and Wellbeing

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