

## **Appendix 1**

### **Further information on A- and O-levels:**

A-levels are advanced level qualifications, which “are subject-based qualifications that can lead to university, further study, training, or work.” (UCAS)

According to IGCSE Centre, “O-Level is the abbreviation of Ordinary Level. It is one of the two-part GCE (General Certificate of Education). The other part of GCE is Advanced Level (A-Level), which students enter after completing O-Level. O-Level is the final certification for secondary school, to be taken at fifth form or year 11 at approximately age 17 (or age group 14-16). Students that have completed O-Level are considered to have completed formal education.” (IGCSE Centre)

## Appendix 2

### *Distribution of Townsend index scores*

#### 1. Above average deprivation

##### Men

Mean: 1.96

Standard deviation: 1.49

Range: 0.01 to 6.09

##### Women

Mean: 1.93

Standard deviation: 1.47

Range: 0.01 to 6.98

#### 2. Below average deprivation

##### Men

Mean: -2.85

Standard deviation: 1.21

Range: -6.73 to -0.02

##### Women

Mean: -2.83

Standard deviation: 1.21

Range: -6.10 to -0.02

### Appendix 3

Odds ratios for MDD according to individual- and area-level characteristics for men who completed the HLEQ questionnaire in the EPIC-Norfolk cohort

Odds ratios and 95% CI		
Characteristic*	Model C <sup>1</sup>	P-value for Model C
<b>Individual-level variables</b>		
<b>Socio-demographics</b>		
<b>Age</b> (per 10 years)	0.47 (0.38, 0.59)	<0.0001
<b>Education<sup>‡</sup></b>		
Low	1.01 (0.69, 1.48)	0.9420
High	1.00	
<b>Marital status</b>		
Single	1.39 (0.71, 2.69)	<0.0001
Married	1.00	
Other*	3.51 (2.32, 5.29)	
<b>Social class<sup>¥</sup></b>		
Manual	1.05 (0.75, 1.47)	0.7747
Non-manual	1.00	
<b>Employment<sup>¥</sup></b>		
No	2.23 (1.45, 3.42)	0.0002
Yes	1.00	
<b>Health status</b>		
<b>Lifetime GAD</b>		
Yes	12.65 (8.68, 18.43)	<0.0001
No	1.00	
<b>Prevalent physical disease</b>		
Yes <sup>+</sup>	1.24 (0.88, 1.74)	0.2176
No	1.00	
<b>Disability level</b>		
High <sup>¶</sup>	2.01 (1.41, 2.86)	0.0001
Low	1.00	
<b>Area-level variable</b>		
<b>Townsend index</b>		
<b>Deprivation</b>		
<b>Unemployment</b>		
Yes (>0)	1.77 (1.16, 2.71)	0.0084
No (<=0)	1.00	
<b>Non-car ownership</b>		
Yes (>0)	1.20 (0.70, 2.04)	0.5067
No (<=0)	1.00	
<b>Non-home ownership</b>		
Yes (>0)	0.81 (0.49, 1.34)	0.4220
No (<=0)	1.00	

### Overcrowding

Yes (>0)	0.93 (0.60, 1.42)	0.7272
No (<=0)	1.00	

1. Adjusted for age, sociodemographics, lifetime GAD, physical diseases and disability

‡ High education: O-level, A-level, degree; low education: refers to no education

\* Other: divorced, separated, widowed

¥ Manual: skilled manual, semi-skilled, non-skilled; non-manual: professionals, managerial, skilled non-manual

+ Prevalent physical disease: respiratory disease (asthma, bronchitis), allergies (allergies, hay fever), stroke, heart attack, cancer, diabetes, thyroid conditions, arthritis

¶ Below the median PCS value of 50.6

\*The brackets show the reference categories that were used for each categorical variable when it was entered in the models - below average deprivation [ref] vs. above average deprivation; education: high [ref] vs. low; marital status: married [ref], single, others; social class: non-manual [ref] vs. manual; employment: yes [ref] vs. no; lifetime GAD: no [ref] vs. yes; prevalent physical disease: no [ref] vs. yes; disability level: low [ref] vs. high. These reference categories were based on the literature.

## Appendix 4

**Odds ratios for MDD according to individual- and area-level characteristics for men and women who completed the HLEQ questionnaire in the EPIC-Norfolk cohort**

	Men (n=8,236)		Women (n=10,335)	
	Odds ratios and 95% CI <sup>1</sup>		Odds ratios and 95% CI <sup>1</sup>	
<b>Characteristic*</b>				
<b>Individual-level variables</b>				
<b>Socio-demographics</b>				
<b>Age</b>				
(per 10 years)	0.47 (0.38, 0.59)	<0.0001	0.59 (0.51, 0.69)	<0.0001
<b>Education<sup>†</sup></b>				
Low	1.00 (0.69, 1.45)	0.9977	1.30 (1.01, 1.67)	0.0384
High	1.00		1.00	
<b>Marital status</b>				
Single	1.41 (0.72, 2.79)	0.3181	0.91 (0.47, 1.75)	0.7737
Married	1.00		1.00	
Other*	3.58 (2.42, 5.28)	<0.0001	2.36 (1.85, 3.02)	<0.0001
<b>Social class<sup>‡</sup></b>				
Manual	1.06 (0.76, 1.49)	0.7340	0.97 (0.76, 1.24)	0.8204
Non-manual	1.00		1.00	
<b>Employment<sup>‡</sup></b>				
No	2.24 (1.49, 3.37)	0.0001	1.55 (1.18, 2.04)	0.0019
Yes	1.00		1.00	
<b>Health status</b>				
<b>Lifetime GAD</b>				
Yes	12.65 (8.71, 18.37)	<0.0001	7.37 (5.57, 9.75)	<0.0001
No	1.00		1.00	
<b>Prevalent physical disease</b>				
Yes <sup>†</sup>	1.25 (0.90, 1.73)	0.1842	1.25 (0.99, 1.59)	0.0658
No	1.00		1.00	
<b>Disability level</b>				
High <sup>¶</sup>	1.98 (1.38, 2.83)	0.0002	1.41 (1.11, 1.80)	0.0048
Low	1.00		1.00	
<b>Area-level variable</b>				
<b>Townsend index</b>				
<b>Deprivation</b>				
Above average	1.51 (1.03, 2.21)	0.0358	1.24 (0.94, 1.64)	0.1325

deprivation (>0)		
Below	1.00	1.00
average deprivation (≤0)		

1. Adjusted for age, sociodemographics, lifetime GAD, physical diseases and disability

‡ High education: O-level, A-level, degree; low education: refers to no education

\* Other: divorced, separated, widowed

¥ Manual: skilled manual, semi-skilled, non-skilled; non-manual: professionals, managerial, skilled non-manual

+ Prevalent physical disease: respiratory disease (asthma, bronchitis), allergies (allergies, hay fever), stroke, heart attack, cancer, diabetes, thyroid conditions, arthritis

¶ Below the median PCS value of 50.6

\*The brackets show the reference categories that were used for each categorical variable when it was entered in the models - below average deprivation [ref] vs. above average deprivation; education: high [ref] vs. low; marital status: married [ref], single, others; social class: non-manual [ref] vs. manual; employment: yes [ref] vs. no; lifetime GAD: no [ref] vs. yes; prevalent physical disease: no [ref] vs. yes; disability level: low [ref] vs. high. These reference categories were based on the literature.