

## Appendix 10

Association of age and body mass index (BMI) with self-reported comorbidities and mental health indicators.

Comorbidities and Mental Health Indicators	Variable	BMI (Model 1 <sup>a</sup> ) and Age (Model 2 <sup>b</sup> )		BMI and Age (Model 3 <sup>c</sup> )	
		Odds Ratio (95% CI)	p-value	Odds Ratio (95% CI)	p-value
Hypertension (N = 107)	BMI	0.97 (0.72, 1.31)	0.84	0.89 (0.63, 1.24)	0.49
	Age	2.03 (1.47, 2.79)	<0.0001	2.02 (1.44, 2.85)	<0.0001
Type 2 Diabetes (N = 124)	BMI	0.94 (0.69, 1.26)	0.66	0.93 (0.67, 1.30)	0.68
	Age	1.41 (1.06, 1.87)	0.02	1.36 (1.00, 1.85)	0.05
CVD (N = 20)	BMI	0.61 (0.31, 1.18)	0.14	0.71 (0.36, 1.42)	0.34
	Age	2.98 (1.52, 5.85)	<0.01	2.27 (1.10, 4.67)	0.03
Arthritis (N = 73)	BMI	1.45 (1.05, 2.00)	0.02	1.62 (1.09, 2.40)	0.02
	Age	3.01 (2.00, 4.54)	< 0.0001	3.64 (2.26, 5.88)	< 0.0001
Back Problems (N = 115)	BMI	1.09 (0.81, 1.47)	0.57	1.12 (0.81, 1.54)	0.49
	Age	1.21 (0.91, 1.59)	0.19	1.12 (0.83, 1.51)	0.46
Asthma (N = 70)	BMI	1.85 (1.32, 2.59)	<0.001	1.81 (1.27, 2.58)	<0.01
	Age	1.12 (0.82, 1.52)	0.49	1.11 (0.79, 1.57)	0.54
Migraine (N = 49)	BMI	1.55 (1.09, 2.20)	0.02	1.63 (1.11, 2.38)	0.01
	Age	0.85 (0.60, 1.18)	0.33	0.91 (0.62, 1.33)	0.63
Irritable Bowel Syndrome (N = 44)	BMI	0.97 (0.66, 1.44)	0.90	1.00 (0.65, 1.54)	1.00
	Age	0.98 (0.69, 1.41)	0.93	1.07 (0.71, 1.60)	0.76

<b>Sleep Apnoea (N = 66)</b>	BMI	1.69 (1.21, 2.36)	<0.01	1.88 (1.27, 2.77)	<0.01
	Age	2.28 (1.55, 3.34)	< 0.0001	2.05 (1.35, 3.11)	<0.001
<b>PCOS (N = 28)</b>	BMI	0.72 (0.42, 1.23)	0.23	0.74 (0.42, 1.30)	0.29
	Age	0.56 (0.36, 0.88)	0.01	0.56 (0.35, 0.90)	0.02
<b>Gastroesophageal Reflux (N = 97)</b>	BMI	1.02 (0.75, 1.39)	0.88	1.06 (0.76, 1.47)	0.73
	Age	0.73 (0.55, 0.98)	0.04	0.68 (0.50, 0.93)	0.01
<b>Male Incontinence (ICIQ-UI SF score ≥ 6) (N = 22)</b>	BMI	1.58 (0.81, 3.09)	0.18	1.99 (0.92, 4.30)	0.08
	Age	2.05 (1.05, 4.01)	0.04	2.19 (1.06, 4.53)	0.03
<b>Female Incontinence (ICIQ-UI SF score ≥ 6) (N = 83)</b>	BMI	1.45 (1.01, 2.09)	0.05	1.40 (0.94, 2.08)	0.10
	Age	1.59 (1.10, 2.28)	0.01	1.49 (1.02, 2.19)	0.04
<b>Depression (PHQ-9 score ≥ 10) (N = 107)</b>	BMI	1.25 (0.92, 1.70)	0.15	1.33 (0.96, 1.86)	0.09
	Age	1.04 (0.79, 1.37)	0.79	0.99 (0.73, 1.34)	0.94
<b>Anxiety (GAD-7 score ≥ 6) (N = 114)</b>	BMI	1.42 (1.04, 1.95)	0.03	1.47 (1.05, 2.05)	0.03
	Age	0.91 (0.69, 1.20)	0.49	0.91 (0.67, 1.24)	0.56

<sup>a</sup>Model 1 – Unadjusted model including only the effect of BMI (per 10 kg/m<sup>2</sup>) on comorbidity.

<sup>b</sup>Model 2 – Unadjusted model including only the effect of age (per 10 years) on comorbidity.

<sup>c</sup>Model 3 – Model including the effects of age (per 10 years) and BMI (per 10 kg/m<sup>2</sup>) on comorbidity, after adjusting additionally for sex, Scottish Index of Multiple Deprivation (SIMD) and smoking status.

Regressions analyses were performed for conditions affecting 10 or more participants only.

CVD, cardiovascular disease; PCOS, polycystic ovary syndrome.

ICIQ-UI SF score: ≥6 = 'moderate incontinence'<sup>1</sup>

PHQ-9 scores: 0-4 = 'minimal depression'; 5-9 = 'mild depression'; 10-14 = 'moderate depression'; 15-19 = 'moderately severe depression'; 20-27 = 'severe depression'<sup>2</sup>

GAD-7 scores: 0-5 = 'mild anxiety'; 6-10 = 'moderate anxiety'; 11-14 = 'moderately severe anxiety'; 15-21 = 'severe anxiety'<sup>3</sup>

## References

- 1 Avery K, Donovan J, Peters TJ, Shaw C, Gotoh M, Abrams P. ICIQ: A brief and robust measure for evaluating the symptoms and impact of urinary incontinence. *Neurourol Urodyn* 2004. <https://doi.org/10.1002/nau.20041>.
- 2 Spitzer RL, Kroenke K, Williams JBW. Validation and utility of a self-report version of PRIME-MD: The PHQ Primary Care Study. *J Am Med Assoc* 1999. <https://doi.org/10.1001/jama.282.18.1737>.
- 3 Spitzer RL, Kroenke K, Williams JBW, Löwe B. A brief measure for assessing generalized anxiety disorder: The GAD-7. *Arch Intern Med* 2006. <https://doi.org/10.1001/archinte.166.10.1092>.