

**Supplementary Table 1: Comparison of selected lifestyle characteristics between participants with and without WEMWBSdata (n=17,030)**

Characteristics	Respondents for WEMWBS(13983)		Non-respondents for WEMWBS(3047)		P value
	N	%	N	%	
<b>BMI</b>					
18.5 kg/m <sup>2</sup> to 25kg/m <sup>2</sup>	4186	34.5	609	32.4	p=0.307
<18.5 kg/m <sup>2</sup>	178	1.5	27	1.4	
25 kg/m <sup>2</sup> to <30kg/m <sup>2</sup>	4581	37.7	709	37.7	
30 kg/m <sup>2</sup> to <40kg/m <sup>2</sup>	2870	23.6	482	25.7	
40+ kg/m <sup>2</sup>	331	2.7	52	2.8	
<b>Smoking</b>					
Never Smoking	3350	24.0	659	22.3	P<0.001
Ex-Smoker	7943	57.0	1625	55.1	
Light Smoker<10/day	945	6.8	219	7.4	
Moderate Smoker 10-< 20/day	1105	7.9	272	9.2	
Heavy Smoker >20/day	599	4.3	174	5.9	
<b>Alcohol Drinking</b>					
Never drinker	4310	31.0	1167	39.7	P<0.001
<=4 units/day/men or<=3 units/day/women	4042	29.0	804	27.4	
>4 and <=8/men or >3and <=6/women	2369	17.0	384	13.1	
>8 units/day/men or >6 units/day women	2491	17.9	317	10.8	
Ex-Drinker	704	5.1	267	9.1	
<b>Fruit and vegetable intake</b>					
5 or more portions/day	3778	27.0	743	24.5	P<0.001
3 to <5 portions /day	4357	31.2	911	30.0	
1 <3 portions/day	4586	32.8	1056	34.8	
<1 portion/day	1257	9.0	327	10.8	

Supplementary Table 2: Sex-stratified logistic regression analyses, odds ratios for low mental well-being, compared to **middle-range** mental well-being

Variables	Univariate		Multivariate analysis(fully adjusted model)*	
	Male	Female	Male	Female
<b>Body Mass Index(kg/m<sup>2</sup>)</b>				
18.5 kg/m <sup>2</sup> to 25kg/m <sup>2</sup>	Ref	Ref	Ref	Ref
<18.5 kg/m <sup>2</sup>	1.53(0.78-3.01)	2.08(1.35-3.21)	0.94(0.43-2.05)	1.75(1.04-2.93)
25 kg/m <sup>2</sup> to <30kg/m <sup>2</sup>	0.74(0.62-0.89)	1.12(0.95-1.32)	0.87(0.69-1.09)	1.17(0.96-1.42)
30 kg/m <sup>2</sup> to <40kg/m <sup>2</sup>	1.01(0.82-1.23)	1.47(1.24-1.75)	1.12(0.87-1.43)	1.31(1.06-1.62)
40+ kg/m <sup>2</sup>	1.83(1.13-2.95)	2.52(1.83-3.45)	1.27(0.71-2.24)	2.10(1.44-3.07)
<b>Smoking</b>				
Never Smoking	Ref	Ref	Ref	Ref
Light Smoker<10/day	1.35(1.01-1.81)	1.48(1.16-1.89)	1.28(0.89-1.84)	1.26(0.91-1.73)
Moderate Smoker 10-< 20/day	1.64(1.25-2.14)	1.84(1.47-2.29)	1.26(0.89-1.77)	1.48(1.10-1.97)
Heavy Smoker >20/day	2.65(1.98-3.56)	2.80(2.13-3.69)	1.44(0.98-2.11)	2.03(1.42-2.91)
Ex-Smoker	0.89(0.73-1.07)	0.85(0.73-0.99)	0.83(0.66-1.05)	0.95(0.77-1.15)
<b>Alcohol Drinking</b>				
Never drinker	Ref	Ref	Ref	Ref
<=4 /day/men or<=3 /day/women	0.57(0.47-0.70)	0.59(0.50-0.70)	0.74(0.57-0.95)	0.80(0.65-1.00)
>4 and <=8/men or >3and <=6/women	0.64(0.52-0.80)	0.66(0.54-0.80)	0.79(0.60-1.05)	0.87(0.68-1.12)
>8 /day/men or >6 /day women	0.70(0.57-0.85)	0.89(0.74-1.07)	0.73(0.56-0.95)	1.07(0.85-1.36)
Ex-Drinker	1.80(1.31-2.47)	1.42(1.12-1.81)	1.42(0.92-2.18)	1.21(0.86-1.70)
<b>Fruit and Vegetable consumption</b>				
5 or more portions/day	Ref	Ref	Ref	Ref
3 to <5 portions /day	1.38(1.21-1.71)	0.93(0.78-1.10)	1.32(1.02-1.71)	0.80(0.64-0.99)
1 <3 portions/day	1.62(1.32-1.98)	1.64(1.40-1.93)	1.25(0.97-1.61)	1.06(0.86-1.31)
<1 portion/day	2.40(1.87-3.09)	2.18(1.83-2.84)	1.84(1.33-2.55)	1.38(1.04-1.83)

\*Fully adjusted models: adjusted for socio-demographic variables (age, marital status, education, **employment status, equivalised household income**, ethnicity) and lifestyle variables (BMI, smoking, alcohol drinking and fruit & vegetable consumption).

**Supplementary Table 3: Sex-stratified logistic regression analyses, odds ratios for high mental well-being, compared to **middle-range** mental wellbeing**

Variables	Univariate		Multivariate analysis(fully adjusted model)*	
	Male	Female	Male	Female
<b>Body Mass Index(kg/m<sup>2</sup>)</b>				
18.5 kg/m <sup>2</sup> to 25kg/m <sup>2</sup>	Ref	Ref	Ref	Ref
<18.5 kg/m <sup>2</sup>	1.16(0.55-2.45)	1.04(0.62-1.76)	0.99(0.40-2.50)	0.96(0.50-1.83)
25 kg/m <sup>2</sup> to <30kg/m <sup>2</sup>	1.01(0.85-1.20)	1.18(1.01-1.37)	0.96(0.78-1.18)	1.12(0.93-1.34)
30 kg/m <sup>2</sup> to <40kg/m <sup>2</sup>	1.07(0.89-1.31)	1.01(0.85-1.21)	0.99(0.79-1.26)	0.97(0.79-1.19)
40+ kg/m <sup>2</sup>	0.92(0.50-1.70)	1.12(0.76-1.65)	0.95(0.49-1.82)	1.06(0.67-1.67)
<b>Smoking</b>				
Never Smoking	Ref	Ref	Ref	Ref
Light Smoker<10/day	0.79(0.58-1.07)	0.63(0.47-0.85)	0.86(0.60-1.24)	0.69(0.48-1.00)
Moderate Smoker 10-< 20/day	0.72(0.54-0.98)	0.65(0.49-0.86)	0.85(0.60-1.22)	0.77(0.55-1.07)
Heavy Smoker >20/day	0.67(0.46-0.99)	0.48(0.30-0.76)	0.73(0.46-1.15)	<b>0.53(0.30-0.94)</b>
Ex-Smoker	0.82(0.70-0.97)	0.81(0.71-0.93)	<b>0.73(0.60-0.88)</b>	<b>0.84(0.70-0.99)</b>
<b>Alcohol Drinking</b>				
Never drinker	Ref	Ref	Ref	Ref
<=4 /day/men or<=3 /day/women	0.90(0.74-1.08)	0.98(0.84-1.14)	0.81(0.64-1.02)	0.95(0.78-1.16)
>4 and <=8/men or >3and <=6/women	0.90(0.73-1.12)	0.99(0.83-1.19)	0.81(0.63-1.05)	1.10(0.88-1.38)
>8 /day/men or >6 /day women	0.74(0.60-0.91)	0.77(0.63-0.95)	<b>0.77(0.60-0.99)</b>	0.91(0.71-1.17)
Ex-Drinker	0.88(0.59-1.32)	1.15(0.88-1.51)	0.74(0.45-1.23)	1.31(0.92-1.86)
<b>Fruit and Vegetable consumption</b>				
5 or more portions/day	Ref	Ref	Ref	Ref
3 to <5 portions /day	0.84(0.70-1.00)	0.75(0.65-0.87)	0.87(0.71-1.06)	<b>0.80(0.66-0.91)</b>
1 <3 portions/day	0.74(0.62-0.89)	0.68(0.58-0.90)	<b>0.77(0.63-0.96)</b>	<b>0.79(0.65-0.96)</b>
<1 portion/day	0.77(0.59-1.01)	0.56(0.42-0.74)	1.06(0.77-1.46)	<b>0.64(0.45-0.91)</b>

\*Fully adjusted models: adjusted for socio-demographic variables (age, marital status, education, **employment status, equivalised household income**, ethnicity) and lifestyle variables (BMI, smoking, alcohol drinking and fruit & vegetable consumption).