Supplementary Materials of

Associations of five obesity indicators with cognitive performance in 30,697 Taiwan Biobank participants

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Table S1. Odds ratio of "poor cognitive performance" (MMSE $\leq$ 25) for various BMI (or BFP, WC, WHR) categories compared to the healthy BMI (or BFP, WC, WHR) group (*P*-values with false discovery rates < 5% were shown in bold)

Table S2. Odds ratio of "poor cognitive performance" (MMSE $\leq$ 25) by increasing one SD of each obesity indicator (*P*-values with false discovery rates < 5% were shown in bold)

Obesity definition	Male participants			Female participants		
	Odds ratio [1]	95% C.I.	*P*-value	Odds ratio [1]	95% C.I.	*P*-value
General obesity defined by BMI [2]						
Underweight (yes vs. no) **BMI < 18.5 kg/m^2**	0.800	[0.473, 1.288]	0.381	0.945	[0.714, 1.234]	0.684
Overweight (yes vs. no) **24 kg/m^2 <= BMI < 27 kg/m^2**	1.045	[0.923, 1.183]	0.488	1.020	[0.926, 1.124]	0.683
Obesity (yes vs. no) **BMI >= 27 kg/m^2**	1.101	[0.954, 1.270]	0.186	1.105	[0.988, 1.234]	0.079
General obesity defined by BFP (yes vs. no) [3] **BFP ≥ 25% for males** **BFP ≥ 30% for females**	1.116	[0.989, 1.257]	0.073	1.011	[0.917, 1.116]	0.828
Abdominal obesity defined by WC (yes vs. no) [4] **WC ≥ 90 cm for males** **WC ≥ 80 cm for females**	1.109	[0.994, 1.237]	0.065	1.166	[1.066, 1.275]	**7.6E-4**
Abdominal obesity defined by WHR (yes vs. no) [5] **WHR ≥ 0.90 for males** **WHR ≥ 0.85 for females**	1.151	[1.024, 1.294]	0.019	1.179	[1.076, 1.293]	**4.4E-4**

Table S1. **Odds ratio of "poor cognitive performance" (MMSE ≤ 25) for various BMI (or BFP, WC,**

WHR) categories compared to the healthy BMI (or BFP, WC, WHR) group (*P*-values with false discovery rates < 5% were shown in bold)

[1] In all logistic regression models, I adjusted for ten covariates: age, smoking status (yes vs. no), drinking status (yes vs. no), regular exercise (yes vs. no), chronic disease status (yes vs. no), depression status (yes vs. no), blood pressure level, total cholesterol, fasting glucose, and educational attainment (1, 2, …, or 7).

[2] Reference group: the healthy weight group (18.5 kg/m^2 <= BMI < 24 kg/m^2).

[3] Reference group: BFP < 25% for males; BFP < 30% for females.

[4] Reference group: WC < 90 cm for males; WC < 80 cm for females.

[5] Reference group: WHR < 0.90 for males; WHR < 0.85 for females.

	Male participants			Female participants		
	Odds ratio	95% C.I.	*P*-value	Odds ratio	95% C.I.	*P*-value
BMI [1]	1.044	[0.989, 1.101]	0.121	1.056	[1.012, 1.101]	**0.012**
Body fat percentage [1]	1.053	[0.995, 1.115]	0.076	1.045	[0.999, 1.093]	0.053
Waist circumference [1]	1.038	[0.983, 1.096]	0.180	1.096	[1.050, 1.143]	**2.4E-5**
Hip circumference [1]	0.989	[0.937, 1.043]	0.678	1.038	[0.996, 1.082]	0.073
Waist-hip ratio [1]	1.076	[1.018, 1.137]	**0.009**	1.102	[1.056, 1.150]	**7.3E-6**

Table S2. **Odds ratio of "poor cognitive performance" (MMSE $\leq$ 25) by increasing one SD of each obesity indicator (*P*-values with false discovery rates < 5% were shown in bold)**

[1] The *z*-score transformation was performed on each obesity measure before fitting the logistic regression. In all logistic regression models, I adjusted for ten covariates: age, smoking status (yes vs. no), drinking status (yes vs. no), regular exercise (yes vs. no), chronic disease status (yes vs. no), depression status (yes vs. no), blood pressure level, total cholesterol, fasting glucose, and educational attainment (1, 2, …, or 7).