

# Supplementary Material

## Dietary Diversity and Mild Cognitive Impairment in Middle-Aged and Older Chinese People: A Cross-Sectional Study

**Supplementary Table 1.** Food groups and food subgroups

<b>Food Groups</b>	<b>Food Subgroups</b>	<b>Food Groups</b>	<b>Food Subgroups</b>	
Beans	Soybean	Meat	Red meat	
	Mixed beans		Poultry meat	
	Soybean milk		Other meat	
	Tofu jelly		Processed meat	
	Bean curd		Haslet	
	Fermented bean curd		Viscera of other animals	
	Other soy products		Other meat products	
Vegetables	Fresh beans	Fish	Fresh water aquatic product	
	Leaf vegetable		Seawater aquatic products	
	Root vegetables		Shrimp, crab	
	Solanaceous vegetable		Soft seafood	
	Melon vegetables	Eggs	Eggs	
	Stem vegetables		Salted eggs	
	Cabbage vegetables		Preserved eggs	
	The onion garlic class		Dairy products	Milk
	Other vegetables			Yogurt
	Ice cream			
Mushrooms	Mushrooms	Other dairy products		
	Edible mushrooms	Nuts	Melon seeds	
	Algae		Peanuts	
	Other nuts			
Fruits	Citrus fruits			
	Kernel fruits			
	Stone fruits			
	Small fruits and berries			
	Tropical fruit			
	Melon class			
	Other fruits			

**Supplementary Table 2.** Sensitivity analysis of the association between DDS and MCI by excluding food groups.

Food groups	OR (95%CI)	<i>p</i>	Excluded food group
Fruits			
score=0	1 (reference)		
score=1	0.59 (0.31,1.13)	0.111	0.86 (0.76,0.96)
Vegetables			
score=0	1 (reference)		
score=1	- <sup>a</sup>	-	0.86 (0.77,0.95)
Mushrooms			
score=0	1 (reference)		
score=1	0.67 (0.49,0.91)	0.011	0.87 (0.77,0.98)
Beans			
score=0	1 (reference)		
score=1	0.87 (0.57,1.33)	0.520	0.84 (0.74,0.94)
Dairy products			
score=0	1 (reference)		
score=1	0.94 (0.68,1.33)	0.748	0.83 (0.74,0.94)
Nuts			
score=0	1 (reference)		
score=1	0.74 (0.56,0.98)	0.037	0.86 (0.75,0.97)
Meat			
score=0	1 (reference)		
score=1	0.41 (0.22,0.75)	0.004	0.87 (0.78,0.97)
Fish			
score=0	1 (reference)		
score=1	0.91 (0.67,1.24)	0.547	0.82 (0.73,0.93)
Eggs			
score=0	1 (reference)		
score=1	1.19 (0.58,2.42)	0.641	0.84 (0.75,0.94)

DDS, dietary diversity scores; MCI, mild cognitive impairment; OR, odds ratios; CI: confidence interval.

Model: adjusted for age, sex, BMI, daily energy intake, education level, marital status, annual household income per capita, smoking status, drinking status, physical activities, hypertension, and diabetes.

<sup>a</sup> -, All subjects in this project scored 1.

**Supplementary Table 3.** Subgroup analysis of association between DDS and MCI.

		DDS	
		OR (95%CI)	p for interaction
Sex			
	Female	0.81 (0.70,0.93)	0.131
	Male	0.97 (0.66,1.43)	
Age			
	<65	0.80 (0.67,0.96)	0.63
	≥ 65	0.89 (0.74,1.08)	
BMI, kg/m <sup>2</sup>			
	<24	0.87 (0.73,1.03)	0.388
	≥24	0.79 (0.65,0.97)	
Hypertension			
	No	0.82 (0.67,1.00)	0.89
	Yes	0.84 (0.70,0.99)	
Diabetes			
	No	0.85 (0.74,0.97)	0.110
	Yes	0.65 (0.39,1.10)	

DDS, dietary diversity scores; OR, odds ratios; CI: confidence interval; BMI: body mass index.

Model: adjusted for age, sex, BMI, daily energy intake, education level, marital status, annual household income per capita, smoking status, drinking status, physical activities, hypertension, and diabetes.

**Supplementary Table 4.** Logistic regression analysis of DDS and MCI in individuals aged 65 and above <sup>a</sup>.

	DDS categories			
	(0,6]	(6,7]	(7,8]	(8,9]
Case (n)	21 (90)	29 (124)	52 (275)	48 (321)
Crude Model <sup>b</sup>	1 (reference)	1.00 (0.52,1.90)	0.80 (0.45,1.42)	0.59 (0.33,1.07)
Fully-adjusted Model <sup>c</sup>	1 (reference)	1.06 (0.54,2.09)	0.95 (0.51,1.75)	0.76 (0.40,1.41)

<sup>a</sup> Data are multivariate  $\beta$  (95% confidence interval); DDS, dietary diversity score.

<sup>b</sup> Crude Model: adjusted for age and sex.

<sup>c</sup> Fully-adjusted Model: adjusted for Crude Model + BMI, daily energy intake, education level, marital status, annual household income per capita, smoking status, drinking status, physical activities, hypertension, and diabetes.

**Supplementary Table 5.** Multiple linear regression analysis of DDS categories and cognitive domains score in individuals aged 65 and above <sup>a</sup>.

Cognitive domains	DDS categories			
	(0,6]	(6,7]	(7,8]	(8,9]
Case (n)	53 (251)	53 (325)	84 (617)	89 (789)
Global cognitive function score				
Crude Model <sup>b</sup>	0 (reference)	0.07 (-0.11,0.25)	0.24 (0.09,0.40)	0.28 (0.13,0.44)
Fully-adjusted Model <sup>c</sup>	0 (reference)	0.08 (-0.11,0.22)	0.17 (0.02,0.32)	0.19 (0.04,0.34)
Episodic memory score				
Crude Model <sup>b</sup>	0 (reference)	0.14 (-0.11,0.38)	0.14 (-0.07,0.36)	0.30 (0.09,0.51)
Fully-adjusted Model <sup>c</sup>	0 (reference)	0.12 (-0.12,0.37)	0.08 (-0.13,0.30)	0.22 (0.01,0.44)
Attention score				
Crude Model <sup>b</sup>	0 (reference)	0.08 (-0.15,0.32)	0.24 (0.03,0.45)	0.28 (0.08,0.49)
Fully-adjusted Model <sup>c</sup>	0 (reference)	0.05 (-0.16,0.27)	0.14 (-0.05,0.33)	0.15 (-0.05,0.34)
Language fluency score				
Crude Model <sup>b</sup>	0 (reference)	0.06 (-0.20,0.31)	0.20 (-0.20,0.43)	0.19 (-0.03,0.41)
Fully-adjusted Model <sup>c</sup>	0 (reference)	0.05 (-0.21,0.30)	0.13 (-0.01,0.36)	0.10 (-0.13,0.32)
Executive function score				
Crude Model <sup>b</sup>	0 (reference)	-0.01 (-0.30,0.29)	-0.38 (-0.44,-0.15)	-0.37 (-0.63,-0.11)
Fully-adjusted Model <sup>c</sup>	0 (reference)	0.01 (-0.29,0.30)	-0.32 (-0.58,-0.06)	-0.30 (-0.56,-0.03)

<sup>a</sup> Data are multivariate  $\beta$  (95% confidence interval); DDS, dietary diversity score.

<sup>b</sup> Crude Model: adjusted for age, and sex.

<sup>c</sup> Fully-adjusted Model: adjusted for Crude Model + BMI, daily energy intake, education level, marital status, annual household income per capita, smoking status, drinking status, physical activities, hypertension, and diabetes.