Supplementary material

Age and sex differences in the association between serum vitamin E levels and depressive symptoms

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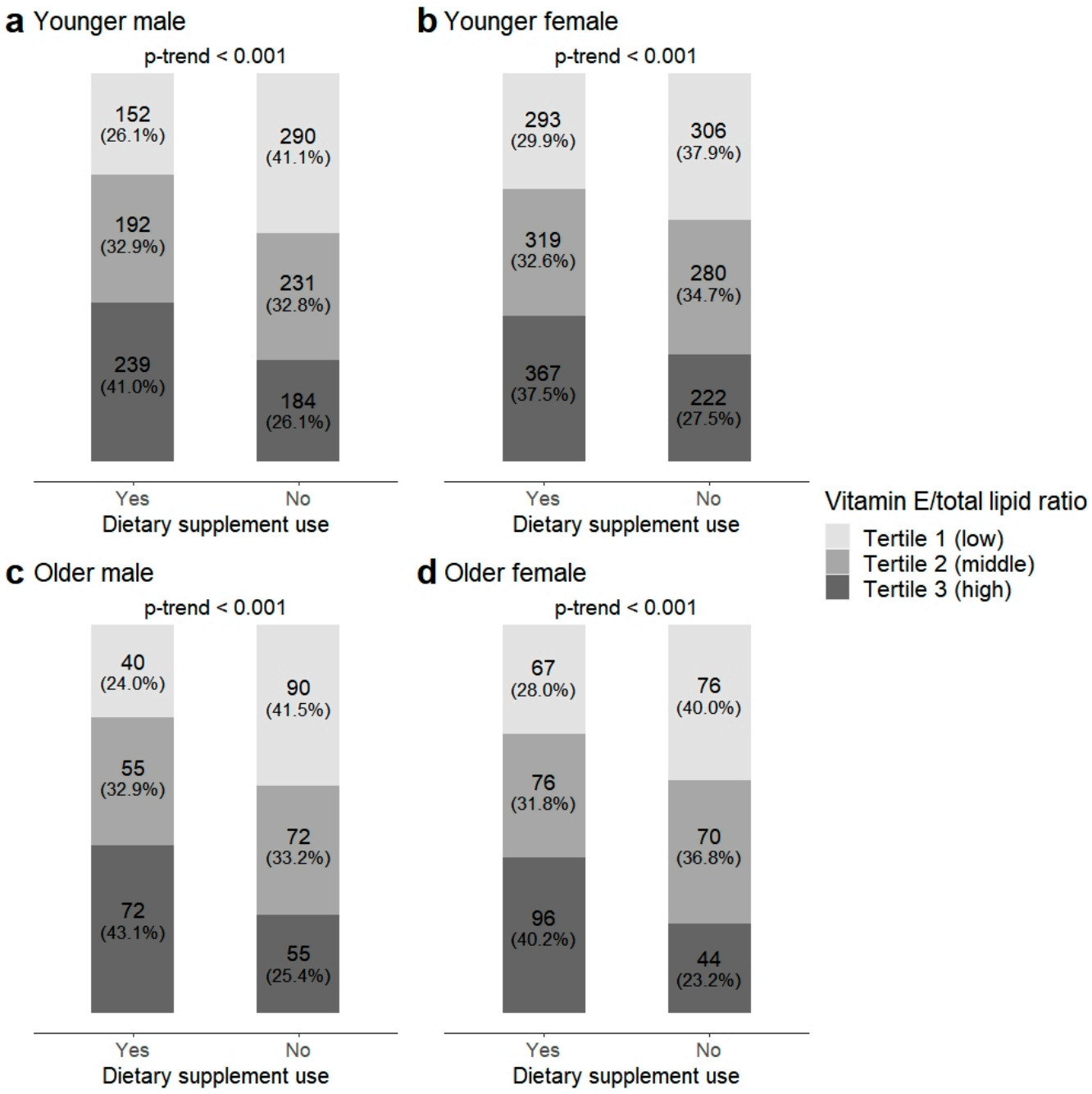
Supplemental Table S1. The association between covariates and depressive symptoms in multivariable linear regression

Covariates	Dependent variable: PHQ-9 score							
	Younger participants (Age <65)				Older participants (Age ≥65)			
	Younger male		Younger female		Older male		Older female	
	β	p-value	β	p-value	β	p-value	β	p-value
Sociodemographic variables								
Educational attainment								
Elementary school and below		Ref		Ref		Ref		Ref
Middle school	**-0.09**	**0.009**	-0.02	0.584	-0.04	0.430	-0.04	0.466
High school	-0.09	0.118	-0.01	0.852	-0.06	0.277	-0.73	0.327
University or above	-0.09	0.123	0.00	0.993	0.04	0.523	-0.01	0.773
Equalized household income								
Quartile 1 (low)		Ref		Ref		Ref		Ref
Quartile 2	**-0.18**	**<0.001**	**-0.15**	**<0.001**	-0.03	0.543	-0.01	0.859
Quartile 3	**-0.24**	**<0.001**	**-0.16**	**<0.001**	-0.11	0.051	**-0.14**	**0.008**
Quartile 4 (high)	**-0.27**	**<0.001**	**-0.22**	**<0.001**	**-0.13**	**0.021**	-0.06	0.204
Residential area								
Urban		Ref		Ref		Ref		Ref
Rural	-0.03	0.214	**0.06**	**0.014**	0.03	0.571	-0.02	0.673
Living situation								
Lives alone		Ref		Ref		Ref		Ref
Lives with other household members	**-0.09**	**<0.001**	-0.01	0.639	-0.08	0.096	-0.04	0.471
Clinical variables								
Alcohol use status								
No		Ref		Ref		Ref		Ref
Yes	0.00	0.908	0.04	0.074	-0.03	0.353	0.00	0.998
Smoking status								
Non-smoker		Ref		Ref		Ref		Ref
Smoker	**0.11**	**<0.001**	**0.15**	**<0.001**	0.01	0.860	0.05	0.265
Chronic medical disease								
None		Ref		Ref		Ref		Ref
One	**-0.08**	**0.001**	0.04	0.068	-0.05	0.344	0.11	0.081
Two or more	**0.10**	**<0.001**	**0.10**	**<0.001**	**0.13**	**0.027**	**0.13**	**0.040**
Physical activity								
Inadequate		Ref		Ref		Ref		Ref
Adequate	-0.01	0.729	0.03	0.176	**0.12**	**0.020**	-0.07	0.133
BMI								
Underweight	0.03	0.225	0.04	0.118	0.05	0.280	0.08	0.074
Normal weight		Ref		Ref		Ref		Ref
Overweight	0.04	0.154	0.02	0.489	0.03	0.503	0.02	0.694
Obesity	0.01	0.711	-0.02	0.493	-0.05	0.315	-0.03	0.477

Statistically significant ($p < 0.05$) results are highlighted in bold.

PHQ-9, Patient Health Questionnaire-9; BMI, body mass index.



Supplemental Figure S1. The proportions of vitamin E/total lipid ratio tertiles according to dietary supplement use status in (a) younger males, (b) younger females, (c) older males, and (d) older females. Data are presented as numbers and percentages.