

The association between dietary quality and well-being among middle-aged adults: a cross-sectional study

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More than a quarter of European adults have experienced a mental health disorder⁽¹⁾. Several studies have demonstrated that certain micronutrients are associated with beneficial effects on mental health^(2–3). However, observing the effect of individual nutrients may not be representative of the impact of the habitual diet on mental health as nutrients are not consumed in isolation. Thus examination of the combined effects of multiple dietary components which reflect the whole diet may be preferable. Evidence regarding the psychological benefits associated with dietary quality and compliance with dietary guidelines is lacking. Therefore the aim of the present study is to examine potential associations between dietary composition, dietary quality and food pyramid compliance with mental health determined by depressive symptoms, anxiety and poor well-being.

Depressive symptoms, anxiety and well-being were assessed using the Centre for Epidemiologic Studies Depression Scale (CES-D)⁽⁴⁾, the Hospital Anxiety and Depression Scale (HADS)⁽⁵⁾ and the World Health Organization (WHO)-5 Well Being Index⁽⁶⁾ in a cross-sectional sample of 2,047 Irish men and women aged 50 to 69 years. Diet was assessed using a self-completed food frequency questionnaire (FFQ). Macronutrient composition, daily servings from each food pyramid shelf, compliance with food pyramid recommendations and a dietary quality score (DASH (Dietary Approaches to Stop Hypertension) was calculated using the FFQ responses. Chi-square tests, t-tests and logistical regression analyses were used to investigate the associations between dietary components and mental health among the whole cohort and when stratified by gender and by BMI group.

Dietary Quality	Depressive Symptoms		Anxiety		Poor well-being	
	OR (95 % CI)	p-value	OR (95 % CI)	p-value	OR (95 % CI)	p-value
Model 1						
Low	1 [reference]		1 [reference]		1 [reference]	
High	0.84 (0.63–1.13)	0.247	0.83 (0.61–1.14)	0.247	0.62 (0.47–0.82)	0.001
Model 2						
Low	1 [reference]		1 [reference]		1 [reference]	
High	0.91 (0.65–1.29)	0.609	0.82 (0.60–1.13)	0.218	0.63 (0.46–0.85)	0.002
Model 3						
Low	1 [reference]		1 [reference]		1 [reference]	
High	1.06 (0.69–1.63)	0.800	0.77 (0.52–1.16)	0.217	0.60 (0.41–0.87)	0.007

Data is presented as OR (95 % CI). DASH is stratified by median. Model 1 is adjusted for age, BMI and gender. Model 2 is additionally adjusted for antidepressant use and history of depression. Model 3 is additionally adjusted for smoking, physical activity and alcohol consumption.

High dietary quality (above median) was associated with lower risk of poor well-being (OR 0.60, 95 % CI 0.41–0.87, $p = 0.007$) relative to those with low dietary quality (below median). This association remained significant among females (OR = 0.52, CI 0.31–0.88, $p = 0.014$) and non-obese individuals (OR = 0.49, 95 % CI 0.31–0.78, $p = 0.003$). Although there was a trend towards reduced risk of depressive symptoms and anxiety among those with high dietary quality these findings did not reach statistical significance. Dietary composition and compliance with food pyramid recommendations were not associated with mental health outcomes. In conclusion, these novel results highlight the importance of dietary quality in maintaining optimal mental health. Better understanding of the relationship between dietary quality and mental health may provide insight into potential therapeutic or intervention strategies to improve well-being.

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