



# Adherence to a Mediterranean Diet is inversely associated with anxiety and stress but not depression: a cross-sectional analysis of community-dwelling older Australians

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An increasing body of evidence has emerged suggesting that lifestyle behaviours, including diet quality, may be an important modifiable risk factor for mental health disorders. The Mediterranean diet (MedDiet), which is often heralded as an anti-inflammatory diet, has been widely investigated and promoted as one of the 'healthiest' dietary patterns for reducing chronic disease risk and promoting healthy ageing<sup>(1)</sup>. Greater adherence to a MedDiet and/or anti-inflammatory diet is inversely associated with the risk of depression or depressive symptoms in younger and middle-aged adults<sup>(2)</sup>. However, these findings have been inconsistent, particularly in older adults. We therefore explored the independent associations between adherence to a MedDiet and severity of symptoms related to depression, anxiety and stress in community-dwelling older adults from Australia. We conducted a cross-sectional study of older Australians aged  $\geq 60$  years. Older adults who were permanent residents of Australia, free from dementia or cognitive decline and could independently complete an anonymous online survey in English were invited to participate. A 75-item self-administered questionnaire was used to assess the relationship between adherence to a MedDiet and severity of symptoms related to depression, anxiety, and stress. MedDiet adherence was assessed using the Mediterranean Diet Adherence Screener (MEDAS)<sup>(3)</sup> and the Depression, Anxiety and Stress Scale (DASS-21)<sup>(4)</sup> was used to assess the severity of negative emotional symptoms. Multivariable linear regression analysis (and 95% CI) was used to investigate the independent association between adherence to a MedDiet and severity of symptoms related depression, anxiety and stress using one unadjusted and six adjusted predictor models. A total of  $n = 294$  participants were included in the final analyses (70.4  $\pm$  6.2 years; Females,  $n = 201$ ; Males,  $n = 91$ ;  $n = 2$  unspecified). Adherence to a MedDiet was inversely associated with severity of anxiety symptoms ( $\beta = -0.118$ ; CI:  $-0.761, -0.012$ ;  $P = 0.043$ ) independent of age, gender, BMI, physical activity, sleep, cognitive risk and ability to perform activities of daily living. Furthermore, MedDiet adherence was inversely associated with symptoms of stress ( $\beta = -0.151$ ; CI:  $-0.680, -0.073$ ;  $P = 0.015$ ) independent of age, gender, BMI, physical activity and sleep. However, no relationship between MedDiet adherence and depressive symptoms was observed. We showed that adherence to a MedDiet is inversely associated with severity of symptoms related to anxiety and stress but not for depression. Exploration of these findings using longitudinal analyses and robust clinical trials are needed to better elucidate these findings in older adults.

**Keywords:** Mediterranean diet; ageing; mental health; depression

## Ethics Declaration

Yes

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## References

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