

The 48th Annual Scientific Meeting of the Nutrition Society of Australia, 3-6 December 2024

Cost-consequence of a Mediterranean diet intervention to improve wellbeing in older South Australians: the MedLey study

E.L. Bracci¹, C.R. Davis^{1,2} and K.J. Murphy¹

¹*Clinical Health Sciences, University of South Australia, Adelaide, South Australia, Australia*

²*Justice and Society, University of South Australia, Adelaide, South Australia, Australia*

Mood disorders such as depression and anxiety are increasing among individuals of all ages and can contribute significantly to decreased quality of life (QoL). The Mediterranean Diet (MedDiet) has been associated with improved mood state and QoL⁽¹⁾. However, few studies have determined the cost-effectiveness of delivering MedDiet interventions to address psychological wellbeing and QoL which is valuable as reducing the risk of non-communicable diseases through diet and lifestyle modification is a public health priority. We aimed first to determine the effect of a 6-month MedDiet intervention (MedLey) on QoL (SF-36V2), then to determine the cost of the intervention with the goal of completing a cost-effectiveness analysis. MedLey was a 6-month dietitian-led MedDiet randomised controlled trial in $n = 152$ Australian's aged ≥ 65 years that led to significant improvements to markers of cardiovascular health. Intervention participants received intensive dietetic support while the equal-attention habitual diet group (HabDiet) were instructed to maintain their usual dietary pattern. Program costs were estimated including staff labour, food hampers and project development. Participants completed the SF-36V2 survey at three timepoints which generates 8 unweighted domain scores and a final 'index score' for use in economic evaluations and determination of quality-adjusted-life-years. Mean weighted index scores were generated using QualtiyMetrics software. Data were analysed using linear mixed effects models to determine a difference between groups in index score over time using a time*group interaction as a base model. A second model adjusting for age and gender was also analysed. MedLey program costs were estimated at \$1,462 AUD per participant to deliver compared to control group participants \$1,101—a differential of \$361. Mean index scores at baseline and 6-months for the MedDiet and HabDiet group were 0.789, 0.824 and 0.818, 0.845, respectively. There were no statistically significant differences in index score from baseline to 6-months between or within groups for the base model. In a second model adjusting for age and gender, a within-group difference was identified in the control group between the 6 and 3-month timepoints (mean difference 0.040, $p = 0.049$). Though not statistically significant, the MedDiet group improved their index score from baseline to 6-months (mean difference 0.037, $p = 0.141$). The MedLey trial did not lead to statistically significant improvements to QoL. Mean index scores of the MedDiet and HabDiet group at baseline were already considerably high leaving little room for improvement over a 6-month intervention period thus a robust cost-utility and economic evaluation could not be undertaken. A longer intervention period or follow up may have been needed to determine any protective effects of the MedDiet. RCTs should continue to investigate the relationship between a MedDiet and QoL and estimate program costs which could be used as community programs for mood disorder prevention.

References

1. Govindaraju T, Sahle BW, McCaffrey TA *et al.* (2018) *Nutrients* **10**(8), 971.