

The 13th European Nutrition Conference, FENS 2019, was held at the Dublin Convention Centre, 15–18 October 2019

## Protective Lifestyle Factors and Cognitive Function in a Middle- to Older-Aged Population: A Cross-Sectional Analysis

Laxmi Gautam, Sean Millar, Ivan J. Perry and Janas Harrington  
*University College Cork, Cork, Ireland*

### Abstract

**Background and Objectives:** Cognitive impairment among the elderly is an important concern worldwide. Evidence suggests that certain lifestyle behaviours may have a protective effect against cognitive decline. In this study we examined the relationship between a 5-component protective lifestyle behaviour score and cognitive function to determine whether the number of protective lifestyle behaviours is related to cognitive decline.

**Materials and Methods:** This was a cross-sectional analysis of the Mitchelstown Cohort Rescreen study, a random sample of men and women aged 51–77 years recruited from a single primary care centre. Cognitive function was assessed using the Mini Mental State Exam (MMSE) and cognitive data were available for 1,022 participants. Cognitive impairment was classified as an upper 75<sup>th</sup> percentile reversed MMSE score value for the study sample. We defined 5 low-risk protective lifestyle behaviours as never smoking, moderate alcohol intake, moderate to vigorous physical activity, a high-quality diet score (upper 40%) and a body mass index between 18.5 to 24.9 kg/m<sup>2</sup>. Linear and logistic regression analyses were used to test associations between a protective factor score and the MMSE.

**Results:** There was a linear relationship between the number of protective lifestyle behaviours and mean cognitive score values and a significant inverse association was observed between a protective lifestyle score and the MMSE cognitive score ( $\beta = -0.20$ , 95% CI: -0.30, -0.10). Logistic regression suggested a dose-response relationship, with odds ratios of having poorer cognitive functioning being noticeably increased in subjects with 0 or 1 PLBs (OR = 2.18, 95% CI: 1.06, 4.52) when compared to participants with 4 or 5 PLBs in multivariable analysis.

**Conclusions:** These data imply that a combination of healthy lifestyle behaviours protects against cognitive impairment. As all of the examined factors are modifiable, small behavioural changes may help in preventing cognitive decline in an elderly population.

### Conflict of Interest

There is no conflict of interest