B-vitamins in Relation to Depression in Older Adults Over 60 Years of Age: The Trinity Ulster Department of Agriculture (TUDA) Cohort Study.


Abstract

OBJECTIVES: Mental health disorders are major contributors to disease burden in older people. Deficient status of folate and the metabolically related B vitamins may be implicated in these conditions. This study aimed to investigate folate, vitamin B12, vitamin B6, and riboflavin in relation to depression and anxiety in aging and also considered the role of fortified foods as a means of optimizing B-vitamin status and potentially reducing the risk of these mental health disorders.

DESIGN: The Trinity Ulster Department of Agriculture (TUDA) aging study was a cross-sectional cohort study.

SETTING AND PARTICIPANTS: Community-dwelling adults (n = 5186; ≥60 years) recruited from 2 jurisdictions within the island of Ireland from 2008 to 2012.

MEASURES: Depression and anxiety were assessed using the Centre for Epidemiological Studies Depression (CES-D) and the Hospital Anxiety and Depression (HAD) scales, respectively. The following B-vitamin biomarkers were measured: red blood cell folate, serum total vitamin B12, plasma pyridoxal-5-phosphate (PLP; vitamin B6), and erythrocyte glutathione reductase activation coefficient (EGRac; riboflavin).

RESULTS: Biomarker values in the lowest 20% of status for folate (odds ratio [OR] 1.79; 95% CI 1.23-2.61), vitamin B6 (OR 1.45, 95% CI 1.07-2.81), but not other vitamins, was associated with increased anxiety.

CONCLUSIONS/IMPLICATIONS: Better B-vitamin status may have a role in impacting positively on mental health in older adults. Regular intake of fortified foods can provide a means of optimizing B-vitamin status and thus could contribute to reducing depression. If confirmed by a randomized trial, these results may have implications for nutrition and mental health policy, and thus quality of life, in older people.

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