



## Editorial

### The Role of Fruit and Vegetable Consumption in Mental Health

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Mental disorders cause a large number of years of life lost due to disability (YLDs) (1). Dietary risks are known as a top risk factor for various non-communicable diseases, and by increasing life-expectancy, dietary risks and mental disorders would be one of the main sources of nonfatal health burden (2).

The inverse association between healthy dietary intakes and several chronic diseases (3, 4) as well as inflammation has been well established. Because of the causative role of inflammation in the etiology of mental disorders (5), foods with anti-inflammatory properties may effectively decrease the risk of mental disorders. Fruits and vegetables (FVs) rich in essential nutrients for mental health such as cobalamine, folate, pyridoxine and magnesium may be more healthful than other food groups. In spite of suggested neuro-protective effects for FVs by several investigators (6-10), the literature is still inconsistent regarding the effectiveness of either total FVs or fruits or vegetables when considered separately. Some investigators suggest that the diversity of FVs is more important than their quantity (6, 11). Overall, green leafy vegetables, vitamin C-rich and  $\beta$ -carotene-rich FVs play a stronger role in mental health, whilst vitamin E-rich FVs may not have considerable role in this regard because FVs are not considered as the main source of vitamin E (6). In addition, consuming greater FVs could be associated with lower dietary glycemic index (GI), which is known as an independent risk factor for depression and anxiety (12).

In spite of all the benefits mentioned above, FVs may have no favorable effect in psychological function that might be explained by the pesticide content of fruits and vegetables, in particular because toxins increase the susceptibility to neurodegenerative diseases and cognitive dysfunction (13). Moreover, cooking may destroy antioxidant content of FVs; therefore, it needs to be taken into account in clinical practice and future research works. Other reasons for inconsistent results among different studies might be related to the amount of FVs intake and the serum concentration of nutrients. On the other hand, it is possible that nutrient deficiency in a population does not allow finding significant association between specific types of FVs and mental disorders (6). Finally, it should be considered that most of evidence in this context comes from observational studies, and further longitudinal and clinical trials are needed to explore the exact role of FVs in mental health.

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