



Is the Alternative Healthy Eating Index (AHEI) Associated with Depression and Anxiety?

Ameneh Marzban; MSc¹ & Abdolrazagh Marzban; PhD^{*2}

¹ Department of Human Ecology, School of Public Health, Shahid Sadoughi University of Medical Sciences, Yazd, Iran.

² Razi Herbal Medicines Research Center, Lorestan University of Medical Sciences, Khorramabad, Iran.

ARTICLE INFO

EDITORIAL ARTICLE

Article history:

Received: 1 Jun 2021

Revised: 19 Jun 2021

Accepted: 19 Jun 2021

*Corresponding author

marzban86@gmail.com

Razi Herbal Medicines Research Center, Lorestan University of Medical Sciences, Khorramabad, Iran.

Postal code: 7486144135

Tel: +98 916 4011432

Anxiety and depression are among the mental disorders that are highly prevalent in advanced and developing societies. Statistics show that one in five people, especially women, suffer from these disorders at some point in their lives. In Iran, the prevalence of anxiety is 15.6% and depression is 12.7% (Khademian *et al.*, 2021, Mohammadi *et al.*, 2019).

Making some dietary changes over the past fifty years has played an important role in increasing mental illness. The method currently used to produce food has upset the balance of important nutrients consumed. People tend to eat foods that contain more sugar and fat and avoid eating fresh foods, leading to depression and memory problems (Firth *et al.*, 2020, Mörkl *et al.*, 2020).

Paying attention to mental health problems with dietary changes sometimes works better than taking medication or counseling (Cherak *et al.*, 2020). Previous studies have examined the association between risk factors, such as unhealthy

diet, diet quality, and physical inactivity with common mental disorders (Saneei P, 2017). Nutrition causes changes in brain function, so that nutritional poverty is one of the most important causes of this disease (Owen and Corfe, 2017, Rozga *et al.*, 2020). Observational studies have shown that consuming nutrients, such as omega-3 fatty acids, and food groups, such as fruits, vegetables, whole grains, and fish reduces the risk of depression (Rahmani *et al.*, 2018). It is recommended to examine the relationship between diet and disease in the form of dietary patterns. Prospective studies have suggested that following a healthy eating pattern in the form of the healthy eating index (HEI) is associated with a reduced risk of depressive symptoms in women (Gibson-Smith *et al.*, 2018). This protective role is related to the components of HEI, including vegetables, fruits, and the ratio of polyunsaturated fatty acids to saturated fatty acids. It was also reported that in the US population, people with high-quality diets,

as determined by the HEI, had fewer depressive symptoms. Similar findings have shown that a higher healthy eating index is associated with a lower chance of developing depression in adults. The results of a meta-analysis study also showed that healthy eating patterns, identified by factor analysis, were associated with a reduced risk of depression (Gündüz *et al.*, 2019, Wu *et al.*, 2020).

However, previous studies have shown the protective effect of a healthy eating pattern against mental disorders in Western societies, There are few studies in this field in the Middle East with a different dietary pattern from Western societies (Begdache *et al.*, 2021, Ghazizadeh *et al.*, 2020). These differences include high consumption of refined carbohydrates, high consumption of saturated and trans fatty acids, low consumption of fruits and vegetables, and no alcohol consumption. Also, due to the stressful lifestyle in the Middle East, the relationship between diet and disease among the people of this region may be different from Western societies (Hariri *et al.*, 2013).

Findings of the present study showed that following the alternative healthy eating index (AHEI) is associated with a reduction in the incidence of depression and anxiety. However, further studies are required in the future to confirm the findings of the present study. There is currently limited evidence linking mental health and food intake, so it is difficult to research and draw definitive conclusions. But in general, the recommendations given in the field of food are in line with the existing recommendations for maintaining health.

Authors' contributions

Both authors collected the data, wrote the draft of manuscript, read and approved the final version of manuscript.

Conflict of interest

There is not any conflict of interest.

References

Begdache L, Chen M-H, McKenna CE & Witt DF 2021. Dynamic association between daily alternate healthy eating index, exercise, sleep,

seasonal change and mental distress among young and mature men and women. *Journal of affective disorders reports*. 100157.

Cherak SJ, et al. 2020. Nutrition interventions in populations with mental health conditions: a scoping review. *Applied physiology, nutrition, and metabolism*. **45 (7)**: 687-697.

Firth J, Gangwisch JE, Borisini A, Wootton RE & Mayer EA 2020. Food and mood: how do diet and nutrition affect mental wellbeing? *British medical journal*. **369**.

Ghazizadeh H, et al. 2020. Association between dietary inflammatory index (DII®) and depression and anxiety in the Mashhad stroke and heart atherosclerotic disorder (MASHAD) study population. *BMC psychiatry*. **20**: 1-11.

Gibson-Smith D, Bot M, Brouwer IA, Visser M & Penninx BW 2018. Diet quality in persons with and without depressive and anxiety disorders. *Journal of psychiatric research*. **106**: 1-7.

Gündüz N, et al. 2019. The relationship between internet addiction and eating attitudes and obesity related problems among university students. *Turkish journal of clinical psychiatry*. **22 (4)**: 1-14.

Hariri N, Nasser E, Houshiar-Rad A, Zayeri F & Bondarianzadeh D 2013. Association between Alternative Healthy Eating Index and 10-year risk of cardiovascular diseases in male-employees in the public sector in Tehran, 1391. *Iranian journal of nutrition sciences & food technology*. **8 (2)**: 41-50.

Khademian F, Delavari S, Koohjani Z & Khademian Z 2021. An investigation of depression, anxiety, and stress and its relating factors during COVID-19 pandemic in Iran. *BMC public health*. **21 (1)**: 1-7.

Mohammadi TM, Sabouri A, Sabouri S & Najafipour H 2019. Anxiety, depression, and oral health: A population-based study in Southeast of Iran. *Dental research journal*. **16 (3)**: 139.

Mörkl S, et al. 2020. The role of nutrition and the gut-brain axis in psychiatry: a review of the literature. *Neuropsychobiology*. **79 (1-2)**: 80-88.

- Owen L & Corfe B** 2017. The role of diet and nutrition on mental health and wellbeing. *Proceedings of the nutrition society*. **76 (4)**: 425-426.
- Rahmani J, Milajerdi A & Dorosty-Motlagh A** 2018. Association of the Alternative Healthy Eating Index (AHEI-2010) with depression, stress and anxiety among Iranian military personnel. *BMJ military health*. **164 (2)**: 87-91.
- Rozga M, Linsenmeyer W, Wood JC, Darst V & Gradwell E** 2020. Hormone therapy, health outcomes and the role of nutrition in transgender individuals: A scoping review. *Clinical nutrition ESPEN*.
- Saneei P EA, Hassanzadeh Keshteli A, Roohafza H, Afshar H, Feizi A, Adibi P** 2017. Association between alternative healthy eating index (AHEI) and depression and anxiety in Iranian adults. *Journal of Neyshabur University of medical sciences*. **4 (4)**: 46-58.
- Wu P-Y, Lin M-Y & Tsai P-S** 2020. Alternate healthy eating index and risk of depression: A meta-analysis and systematic review. *Nutritional neuroscience*. **23 (2)**: 101-109.