Letter to Editor

Diet, Disability, and Disparities: A Public Health Perspective on Fatigue and Depression in Multiple Sclerosis: Letter to the Editor

Dear Editor

I am writing to comment on a recent article by Sharifi and colleagues,[1] entitled "The Effectiveness of Modified Mediterranean and Traditional Persian Diets in Fatigue and Depressive Severity in People with Multiple Sclerosis: A Randomized Controlled Clinical Trial". As a professor of preventive medicine and social health, I commend the authors for addressing the crucial role of dietary interventions in managing the debilitating symptoms of multiple sclerosis (MS), particularly fatigue and depression. This research contributed valuable insights to the growing body of evidence supporting lifestyle integration into comprehensive MS care. However, I believe that a broader public health perspective, incorporating accessibility, cultural relevance, and social determinants of health, is essential to fully realize the potential of these findings.

The findings of the study were promising, demonstrating that a modified Mediterranean (MED) diet could reduce fatigue scores, while a Traditional Persian (TP) diet could reduce depression scores in individuals with MS. However, interventions should be designed and implemented considering both the patient population's needs and the broader cultural context.[2] For instance, research should investigate not only whether a diet is effective, but also whether it is accessible, affordable, and sustainable for individuals with MS, who often face physical limitations, financial constraints, and social isolation.[3]

While the randomized controlled trial design strengthened the internal validity of the study, its single-center setting in Shiraz, Iran, restricted the generalizability of the findings. The applicability of the TP diet, in particular, might be confined to populations familiar with Persian cuisine, which emphasized a broader issue warranting further research. Future studies should investigate the cultural relevance and adaptability of dietary interventions across diverse populations, addressing their unique nutritional needs, culinary traditions, and cultural beliefs.

It is also important to acknowledge that the modest sample size and relatively short intervention period (two months) limited the conclusions that could be drawn regarding the long-term efficacy and sustainability of these dietary interventions. Longitudinal studies with more diverse participants are required to validate these findings and determine the optimal duration and components of dietary interventions for individuals with MS. Such studies could also investigate whether these dietary interventions might help reduce the risk of developing MS in the first place.

Furthermore, while the study's focus on fatigue and depression addressed critical aspects of MS, it failed to fully encompass the multifaceted challenges faced by individuals with this condition. A more comprehensive public health approach would examine broader social determinants of health, such as access to healthcare, employment opportunities, social support systems, and transportation, all of which significantly impact the overall well-being of individuals living with MS.[4] The researchers reported that higher levels of fatigue and longer duration of disease were associated with more severe depression, which emphasized the necessity for multidimensional support systems for affected individuals.

From a public health perspective, effective translation of these findings requires a multi-pronged approach. Interventions must be both evidence-based and practical, incorporating accessible and affordable nutritional resources, educational tools, and support networks to enhance long-term dietary adherence. Complementary policy initiatives might be required to address systemic barriers to care and ensure equitable access to these resources. The study highlighted that older individuals and those with higher socioeconomic status had improved mental well-being, which suggested the existence of additional protective factors that could be identified and targeted in future public health strategies.

I particularly commend the authors for including the TP diet in their investigations, which appropriately highlighted the significance of culturally adapted dietary practices. Future research should explore optimal strategies for adapting such interventions across diverse cultural contexts to enhance both acceptability and effectiveness.

In conclusion, the study by Sharifi and colleagues provided promising evidence supporting dietary interventions for managing MS-related fatigue and depression.[1] However, realizing their full potential requires adopting a broader public health perspective that can address key implementation factors, including accessibility, affordability, cultural adaptation, and the social determinants of health, and continued research with larger, more diverse populations and longer follow-up periods. Furthermore, a systems-based approach accounting for multifactorial health influences is essential. Ultimately, collaboration among researchers, clinicians, and policymakers is essential to enhance the quality of life for individuals with MS.

Conflict of Interest: None declared.

Keywords ● Fatigue ● Depression ● Multiple sclerosis ● Dietary interventions ● Modified mediterranean

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Received: 19 March 2025
Revised: 01 May 2025
Accepted: 05 May 2025

Please cite this article as: Byeon H. Diet, Disability, and Disparities: A Public Health Perspective on Fatigue and Depression in Multiple Sclerosis: Letter to the Editor. Iran J Med Sci. doi: 10.30476/ijms.2025.106380.4053.

References

1 Sharifi MH, Poursadeghfard M, Afshari M, Alizadeh Z, Vatanpour M, Soltani M, et al. The Effectiveness of Modified Mediterranean and Traditional Persian Diets in Fatigue and Depressive Severity in People with Multiple Sclerosis: A Randomized Controlled Clinical Trial. Iran J Med Sci. 2025;50:146-58. doi: 10.30476/ijms.2024.101961.3472. PubMed PMID: 40224203; PubMed Central PMCID: PMCPMC11992347.

2 Atabilen B, Akdevelioglu Y. Effects of different dietary interventions in multiple sclerosis: a systematic review of evidence from 2018 to 2022. Nutr Neurosci. 2023;26:1279-91. doi: 10.1080/1028415X.2022.2146843. PubMed PMID: 36384390.

3 Livingstone KM, Love P, Mathers JC, Kirkpatrick SI, Olstad DL. Cultural adaptations and tailoring of public health nutrition interventions in Indigenous peoples and ethnic minority groups: opportunities for personalised and precision nutrition. Proc Nutr Soc. 2023;82:478-86. doi: 10.1017/S002966512300304X. PubMed PMID: 37334485.

4 Dobson R, Rice DR, D'Hooghe M, Horne R, Learmonth Y, Mateen FJ, et al. Social determinants of health in multiple sclerosis. Nat Rev Neurol. 2022;18:723-34. doi: 10.1038/s41582-022-00735-5. PubMed PMID: 36369488; PubMed Central PMCID: PMCPMC9651126.

The Authors' Reply

Dear Editor

We appreciate the scientific community's interest in our study entitled "The Effectiveness of Modified Mediterranean and Traditional Persian Diets on Fatigue and Depressive Severity in People with Multiple Sclerosis: A Randomized Controlled Clinical Trial."

This study demonstrated that a modified Mediterranean (MED) diet significantly reduced fatigue scores, while a Traditional Persian (TP) diet indicated notable efficacy in decreasing depression scores among individuals with multiple sclerosis (MS). To ensure real-world impact, such dietary interventions must prioritize practicality and long-term sustainability. In this study, we specifically emphasized three critical implementation factors: accessibility, affordability, and cultural suitability, particularly within the Persian cultural context where these dietary patterns are already familiar.

The authors believed that the TP dietary recommendations aligned well with local food habits, making them highly feasible for Persian society. However, certain aspects of the MED, such as daily olive oil and weekly seafood consumption, might not be universally accessible in Iran due to economic or geographical constraints.

Additionally, we highlighted the importance of cultural compatibility in dietary interventions. While the MED demonstrates substantial alignment with Persian dietary traditions (except for wine consumption, which is culturally inappropriate), its broader implementation across Iran requires further investigation in diverse population groups to establish applicability.

As with all randomized controlled trials, our study had limitations. While we specifically examined the effects of the MED and TP diets on fatigue and depression, we acknowledged that MS management requires comprehensive, multimodal approaches. Future research should therefore incorporate larger-scale, multicenter trials with diverse participant populations to both validate our findings and optimize dietary intervention protocols.

A multidisciplinary approach, involving neurologists, nutritionists, and cultural experts, will be crucial for developing effective interventions. Furthermore, comprehensive large-scale studies should examine how socioeconomic status, geographic location, and cultural background affect dietary adherence and clinical outcomes in MS patients.

To the best of our knowledge, this study was the first clinical trial investigating the effects of a Traditional Persian diet on MS symptoms. It is strongly recommended that further research be conducted to validate these findings and examine the long-term effects of dietary interventions on disease progression and quality of life in MS patients.

Conflict of Interest: None declared.

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