

Olive Oil Consumption and Risk of Neurodegenerative Disease-Dementia

Dear Editor:

Dementia is a neurodegenerative ailment that impairs the proper functioning of neurons, resulting in memory and cognitive impairment and eventual inability to perform basic tasks.¹ It typically presents later in life and is the sixth leading cause of death in the United States. Notably, deaths from heart disease and prostate cancer have decreased over the past 2 decades, while deaths from Alzheimer's disease have increased.²

The Mediterranean diet has gained popularity due to its beneficial effects on cardiovascular health, particularly in reducing the risk of heart disease.³ Olive oil, a key component of the Mediterranean diet, contains anti-inflammatory properties due to its high content of monounsaturated fatty acids, vitamin E, and polyphenols.⁴ This suggests that olive oil has a positive effect on heart health. However, the relationship between olive oil consumption and cognitive health has only recently been studied by Tessier et al.⁵

This recent longitudinal study was undertaken to assess the correlation between olive oil consumption and the likelihood of succumbing to dementia. Spanning 28 years, the study enrolled 92 383 adults. During the course of the investigation, 47 510 deaths were documented, of which 4751 were attributed to dementia. The findings revealed that individuals who consumed at least 7 grams of olive oil per day exhibited a 28% lower risk of dying from dementia. Furthermore, replacing margarine and mayonnaise with an equivalent amount of olive oil was associated with an 8% to 14% lower risk of dementia-related deaths. However, there was no significant relationship observed when olive oil was substituted with butter or vegetable oil.⁵ In a nutshell, olive oil can lessen the chances of dementia and has fewer adverse effects on cognitive health relative to substitutes.

These results align with dietary recommendations for maintaining cognitive health, as olive oil is beneficial not only for cardiovascular health but also for reducing the risk of dementia.

—Muhammad Ali, MBBS; Zain Afridi, MBBS

REFERENCES

1. What Is Dementia? Symptoms, Types, and Diagnosis. National Institute on Aging. Reviewed December 8,

2022. Accessed May 13, 2024. <https://www.nia.nih.gov/health/alzheimers-and-dementia/what-dementia-symptoms-types-and-diagnosis>

2. 2019 Alzheimer's disease facts and figures. *Alzheimers Dement*. 2019;15(3):321-387. doi:10.1016/j.jalz.2019.01.010

3. Guasch-Ferré M, Willett WC. The Mediterranean diet and health: a comprehensive overview. *J Intern Med*. 2021;290(3):549-566. doi:10.1111/joim.13333

4. Gaforio JJ, Visioli F, Alarcón-de-la-Lastra C, et al. Virgin olive oil and health: summary of the III International Conference on Virgin Olive Oil and Health Consensus Report, JAEN (Spain) 2018. *Nutrients*. 2019;11(9):2039. doi:10.3390/nu11092039

5. Tessier AJ, Cortese M, Yuan C, et al. Consumption of olive oil and diet quality and risk of dementia-related death. *JAMA Netw Open*. 2024;7(5):e2410021. doi:10.1001/jamanetworkopen.2024.10021

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Perception and Experience of PA Students and Clinical Rotations

Dear Editor:

With an increase in physician assistant (PA) programs, demand for clinical rotations is increasing.¹ Clinicians are hesitant to precept students due to perceptions of decreased productivity and financial burden.² A study of PA program probation revealed 4 of the 7 most common violations were related to supervised clinical practice experience.³ With expanding PA involvement in the growing hospitalist specialty, our goal is to prepare students for clinical work and for the Physician Assistant National Certifying Examination (PANCE).⁴ To achieve an innovative, structured clinical rotation in the Section of Hospital Medicine at the Medical College of Wisconsin, each of our advanced practice providers implemented a daily lecture on various medicine topics. The PA students were provided a list of expectations, a “how-to guide,” and a documentation cheat sheet. Students are actively involved in seeing patients, writing notes, calling consults, and communicating with members of the health care team.

From June 2023 through May 2024, we surveyed 19 PA students before and after their internal medicine rotation using a Qualtrics survey. We received 19 pre-rotation and 17 post-rotation surveys. Per the pre-rotation survey, 74% had not participated in daily lectures at their clinical rotations, and 89% responded that they had received a document with rotation expectations. The post-rotation survey indicated that 1 student attended 0 to 5 lectures, 3 students attended 5 to 10 lectures, 7 students attended 10 to 15 lectures, and 6 students attended over 15 lectures. Of the respondents, 88% strongly agreed the lecture series prepared them for their end-of-rotation exam, and 100% said they felt prepared to apply the knowledge they learned from the lectures clinically. When asked to rate the lectures on a scale of 1 to 5, with 5 being the greatest, 76% rated the lectures a 5, and 24% rated them a 4. When asked if the rotation met expectations, 88% of respondents replied “strongly agree,” 12% replied “agree,” and 100% said they would recommend this rotation to others.

The survey results indicate PA students perceive benefits of a structured rotation. The daily lecture series helped prepare them for end-of-rotation exams and apply knowledge clinically. Passing the internal medicine exam is a strong indicator that the student will pass the PANCE.⁵ As PA training programs expand, there is a need for similar initiatives and to retain students for clinical work within the organization. We can decrease the gap between increasing students and demand for preceptors by leveraging our existing PAs and developing and implementing structured clinical rotations to prepare our future workforce.

—Andrea Bequest, PA-C; Pinky Jha, MD, MPH; Paige Gioia, PA-C

REFERENCES

1. Fankhanel C, Brissette D, Garino A. The commoditization of clinical rotations. *J Physician Assist Educ*. 2022;33(2):76-77. doi:10.1097/JPA.0000000000000416.
2. Evans TC, Wick KH, Andrilla CHA, Skaggs SA, Burgin T. A method to study the effect of a physician assistant student on preceptor productivity. *J Physician Assist Educ*. 2018;29(4):205-210. doi:10.1097/JPA.0000000000000220
3. Snyder JA, Skala T. Citation and characteristic analysis of physician assistant programs placed on accreditation—probation, 2015–2017. *J Physician Assist Educ*. 2018;29(4), 211–219. doi:10.1097/jpa.0000000000000225

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Accessed December 27, 2023. <https://innovation.cms.gov/strategic-direction-whitepaper>

6. Singhal S, Patel N. The future of US healthcare: what's next for the industry post-COVID 19?. McKinsey & Company. July 19, 2022. Accessed December 27, 2023. <https://www.mckinsey.com/industries/healthcare/our-insights/the-future-of-us-healthcare-whats-next-for-the-industry-post-covid-19>

7. Wilson M, Guta A, Waddell K, Lavis J, Reid R, Evans C. The impacts of accountable care organizations on patient experience, health outcomes and costs: a rapid review. *J Health Serv Res Policy*. 2020;25(2):130-138. doi:10.1177/1355819620913141

8. Bernstein AS, Stevens KL, Koh HK. Patient-centered climate action and health equity. *JAMA*. 2022;328(5):419-420. doi:10.1001/jama.2022.12404

9. Climate change and health. World Health Organization. October 12, 2023. Accessed December 27, 2023. <https://www.who.int/news-room/fact-sheets/detail/climate-change-and-health>

10. Ragavan MI, Marcil LE, Garg A. Climate change as a social determinant of health. *Pediatrics*. 2020;145(5):e20193169. doi:10.1542/peds.2019-3169

11. Dzau VJ, Levine R, Barrett G, Witty A. Decarbonizing the U.S. health sector — a call to action. *N Engl J Med*. 2021;385(23):2117-2119. doi:10.1056/NEJMp2115675

12. HHS launches pledge initiative to mobilize health care sector to reduce emissions. News release. U.S. Department of Health and Human Services; April 22, 2022. Accessed December 27, 2023. <https://www.hhs.gov/about/news/2022/04/22/hhs-launches-pledge-initiative-mobilize-health-care-sector-reduce-emissions.html>

13. Ramseur JL. Inflation Reduction Act of 2022 (IRA): provisions related to climate change. Congressional Research Service. Updated October 26, 2023. Accessed December 27, 2023. <https://crsreports.congress.gov/product/pdf/R/R47262>

14. Lee VS, Gerwig K, Hough E, Mate K, Biggio R, Kaplan RS. Decarbonizing health care: engaging leaders in change. *NEJM Catal Innov Care Deliv*. 2023;4(5):CAT.22.0433. doi: 10.1056/CAT.22.0433

15. Whelan T, Fink C. The comprehensive business case for sustainability. *Harvard Business Review*. October 21, 2016. Accessed December 27, 2023. <https://hbr.org/2016/10/the-comprehensive-business-case-for-sustainability>

16. Putnis N, Neilson M. Environmental sustainability and quality care: not one without the other. *Int J Qual Health Care*. 2022;34(3):mzac066. doi:10.1093/intqhc/mzac066

17. Mortimer F, Isherwood J, Wilkinson A, Vaux E. Sustainability in quality improvement: redefining value. *Future Healthc J*. 2018;5(2):88-93. doi:10.7861/futurehosp.5-2-88

18. Pendleton R. We won't get value-based health care until we agree on what "value" means. *Harvard Business Review*. February 27, 2018. Accessed December 27, 2023. <https://hbr.org/2018/02/we-wont-get-value-based-health-care-until-we-agree-on-what-value-means>

19. MacNeill AJ, McGain F, Sherman JD. Planetary health care: a framework for sustainable health. *Lancet Planet Health*. 2021;5(2):e66-e68. doi:10.1016/S2542-5196(21)00005-X

20. Robert KH, Broman G. Prisoners' dilemma misleads business and policy making. *J Clean Prod*. 2016;140(1):10-16. doi.org/10.1016/j.jclepro.2016.08.069

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4. Sharma P, Brooks M, Roomiani P, Verma L, Criscione-Schreiber L. Physician assistant student training for the inpatient setting: a needs assessment. *J Physician Assist Educ*. 2017;28(4):189-195. doi:10.1097/JPA.0000000000000174

5. Gietzen L, Roman C, Hegmann T. Reliability and validity of national end of rotation examinations: an update. *J Physician Assist Educ*. 2018;29(2):86-88. doi:10.1097/JPA.0000000000000191

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Examining the Relationship Between Obstructive Sleep Apnea During Pregnancy and Autistic Spectrum Disorder in Children

Dear Editor,

We recently reviewed the article "Are Symptoms of Obstructive Sleep Apnea During Pregnancy Associated With Autism Spectrum Disorder in Children: A Case-Control Study" by Nick et al¹ with great interest. Obstructive sleep apnea (OSA) is a common and serious condition. While treatments like continuous positive airway pressure (CPAP) and mandibular advancement splints are effective, many patients struggle with adherence.²

The study offers valuable insights into OSA but could be strengthened by exploring neuroinflammation in offspring due to gestational OSA and the sex-specific effects on children. These areas hold potential for uncovering new pathways and biomarkers, paving the way for more targeted treatments. Notably, a recent study revealed an increased soluble vascular endothelial growth factor receptor 1/PIGF ratio and reduced levels of pregnancy-associated plasma protein A in individuals with sleep

disorder breathing, after adjusting for key factors.³

The study by Nick et al relied on self-reported symptoms and medical history rather than objective sleep testing, which may have influenced the findings. Previous research shows that increased daytime drowsiness is common during pregnancy, so this factor could affect results.⁴ While somnolence is not always a reliable indicator of severe sleep disorders in pregnancy, exploring more clinical markers could enhance the understanding of OSA's impact. Including confounding factors, such as maternal health and social circumstances, in future studies would provide a more comprehensive analysis.⁵

—Saim Mahmood Khan, MBBS; Jawairya Muhammad Hussain, MBBS; Iman Azam, MBBS

REFERENCES

1. Nick J, Seaborg K, Kastner K, Bazalakova M, Antony K. Are Symptoms of Obstructive Sleep Apnea During Pregnancy Associated With Autism Spectrum Disorder in Children: A Case-Control Study. *WJM*. 2024;123(1):18-23.
2. Carney AS, Antic NA, Catchside PG, et al. Sleep apnea multilevel surgery (SAMS) trial protocol: a multicenter randomized clinical trial of upper airway surgery for patients with obstructive sleep apnea who have failed continuous positive airway pressure. *Sleep*. 2019;42(6):zsz056. doi:10.1093/sleep/zsz056
3. Onslow ML, Wolsk J, Wisniewski S, et al. The association between sleep-disordered breathing and maternal endothelial and metabolic markers in pregnancies complicated by obesity. *J Clin Sleep Med*. 2023;19(1):97-109. doi:10.5664/jcs.10254
4. Pien GW, Pack AI, Jackson N, Maislin G, Macones GA, Schwab RJ. Risk factors for sleep-disordered breathing in pregnancy. *Thorax*. 2014;69(4):371-377. doi:10.1136/thoraxjnl-2012-202718
5. Köseoğlu Hİ, İnanır A, Kanbay A, et al. Is there a link between obstructive sleep apnea syndrome and fibromyalgia syndrome?. *Turk Thorac J*. 2017;18(2):40-46. doi:10.5152/TurkThoracJ.2017.16036

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