

Letter to the Editor:

Performance Analysis of ChatGPT-3.5, Copilot and Gemini on Multiple Choice Questions on Ocular Inflammation and Uveitis: The Effect of Language Differences: A Cross-Sectional Research

ChatGPT-3.5, Copilot ve Gemini'nin Oküler İnflamasyon ve Üveit Konusundaki Çoktan Seçmeli Sorularda Performans Analizi: Dil Farklılıklarının Etkisi: Kesitsel Araştırma

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Dear Editor,

We read with great interest the original study published in the Türkiye Klinikleri Journal of Ophthalmology, entitled "Performance Analysis of Chat Generative Pretrained Transformer (ChatGPT-3.5), Copilot and Gemini on Multiple Choice Questions on Ocular Inflammation and Uveitis: The Effect of Language Differences: a Cross-Sectional Research".¹ The study makes an important contribution to understanding the potential of artificial intelligence (AI) in ophthalmology. However, we would like to present some suggestions and criticisms for further enhancing this study.

The study mentions that a certified translator translated the questions, but it does not specify whether they specialize in ophthalmology, which could affect the study's results. While the translations are accurate from a linguistic perspective, the main

problem lies in how AI models are interpreted with respect to Turkish sentence structures and medical terminology. Research evidence indicates that translation quality could affect the output of AI, particularly in specialized fields such as medicine.^{2,3} In addition, the role of clinicians' experience in the diagnosis and treatment of uveitis should not be forgotten.⁴

We congratulate the authors for their precious contribution to investigating the role of AI in uveitis. However, some methodological obstacles restriction the general applicability of those consequences. Although AI has great potential in the field of ophthalmology, language differences can affect its performance, and language performance resources require stricter control to prevent errors.⁵ Future studies with larger sample sizes could help improve

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strategies that enable AI to function more consistently, regardless of language variations.

Source of Finance

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Conflict of Interest

No conflicts of interest between the authors and / or family members of the scientific and medical committee members or members of the potential conflicts of interest, counseling, expertise, working conditions, share holding and similar situations in any firm.

Authorship Contributions

All authors contributed equally while this study preparing.

REFERENCES

1. Şensoy E, Çitink M. ChatGPT-3.5, Copilot ve Gemini'nin oküler inflamasyon ve üveit konusundaki çoktan seçmeli sorularda performans analizi: dil farklılıklarının etkisi: kesitsel araştırma [Performance analysis of ChatGPT-3.5, Copilot and Gemini on multiple choice questions on ocular inflammation and uveitis: the effect of language differences: a cross-sectional research]. Türkiye Klinikleri Journal of Ophthalmology. 2025;34(1):12-6. doi: 10.5336/ophthal.2024-104953
2. Almahasees Z, Husienat I. A comparative analysis of terminological inconsistency in scientific translation from English into Arabic across different medical fields. Training, Language and Culture. 2024;8(3):25-40. [https://rudn.tlcjournal.org/archive/8\(3\)/8\(3\)-02.pdf](https://rudn.tlcjournal.org/archive/8(3)/8(3)-02.pdf)
3. Mohamed YA, Khanan A, Bashir M, Mohamed AHH, Adiel MA, Elsadig MA. The impact of artificial intelligence on language translation: a review. IEEE Access. 2024;12:25553-79. doi:10.1109/ACCESS.2024.3366802
4. Sharma SM, Nestel AR, Lee RW, Dick AD. Clinical review: anti-TNFalpha therapies in uveitis: perspective on 5 years of clinical experience. Ocul Immunol Inflamm. 2009;17(6):403-14. PMID: 20001261.
5. Barwise AK, Curtis S, Diedrich DA, Pickering BW. Using artificial intelligence to promote equitable care for inpatients with language barriers and complex medical needs: clinical stakeholder perspectives. J Am Med Inform Assoc. 2024;31(3):611-21. PMID: 38099504; PMCID: PMC10873784.