USE OF AI AS A STUDY TOOL IN RHEUMATOLOGY AMONG INTERNAL MEDICINE RESIDENTS: USE WITH CAUTION

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♦ BACKGROUND

- The potential of AI as a study tool has generated considerable interest.
- Whether using AI alongside traditional lectures impacts knowledge retention?

♦ METHODS

1. Before the "Perioperative Management of People with Rheumatic Disease" lecture, 26 residents were divided into two groups: "Regular" and "Artificial Intelligence (AI)."
2. Both groups completed the same set of six clinical questions, along with some demographic questions.
3. The regular group answered the questions before and one month after the lecture.
4. The AI group first answered the questions, then used ChatGPT (3.5) to answer again.
5. After one month, both groups completed the same questions without using AI to assess knowledge retention.
6. Statistical analysis was performed using Spearman's correlation coefficient (ϱ) and T-test.

Figure 1. The percentage of correct answers with and without AI

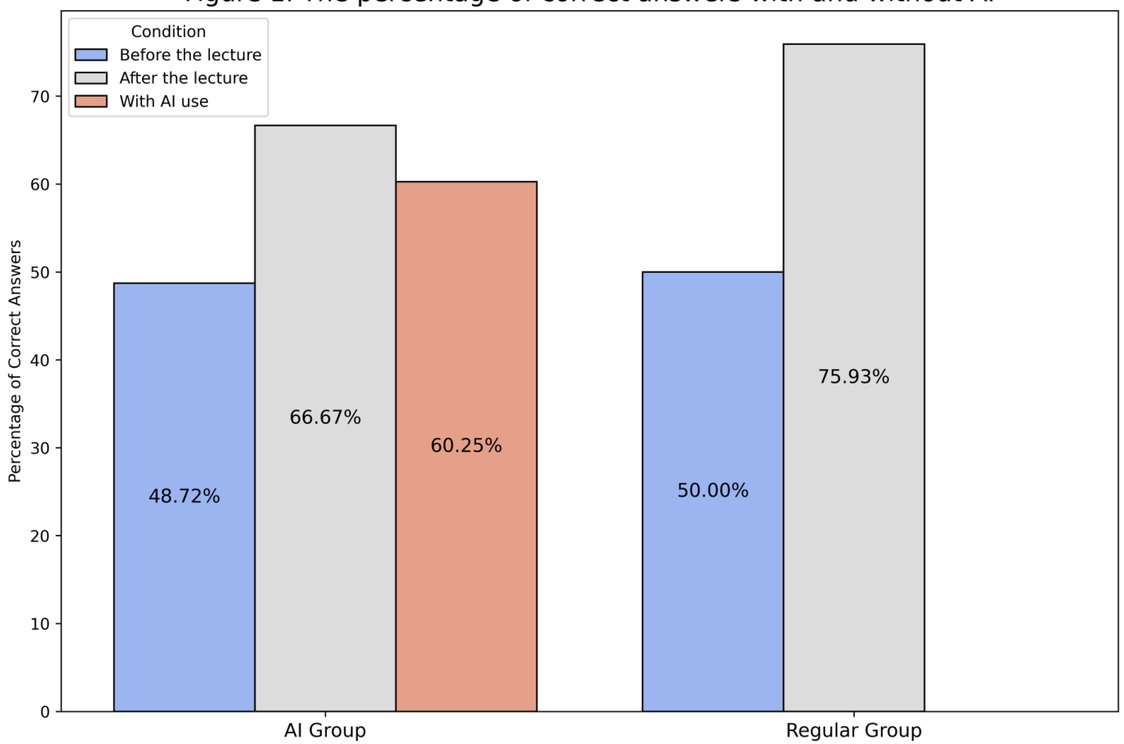
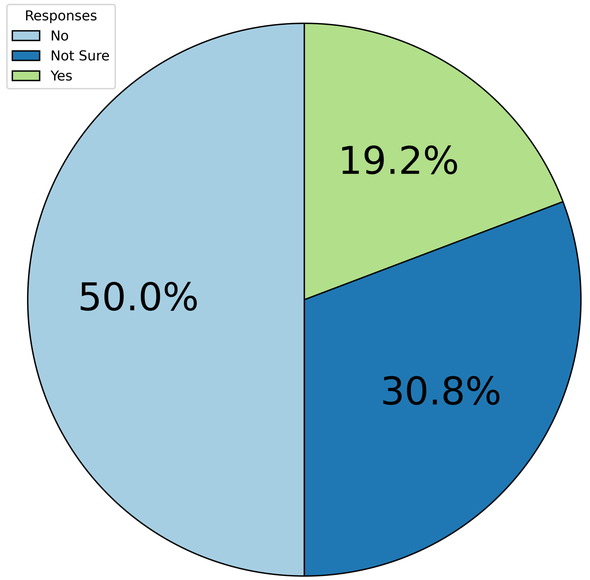


Figure 2. Distribution of opinions on AI as a superior studying tool

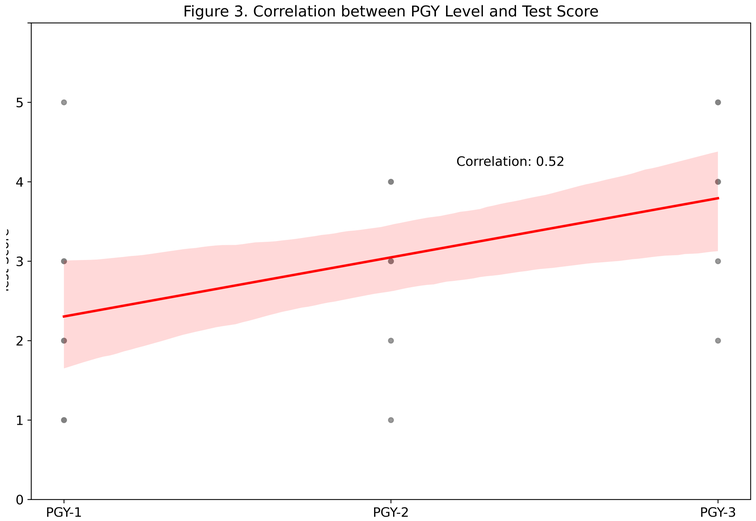


Regarding the main question of whether AI affects knowledge retention, there was a statistically significant difference in knowledge growth between the groups. The regular group showed a greater increase in correct answers post-lecture compared to the AI group (t = -3.81, p = 0.00042), suggesting that AI use as a study tool may negatively impact knowledge retention.

♦ RESULTS

- Out of 26 residents initially assigned (13 in the AI group and 13 in the regular group), 21 completed the post-lecture test (12 in the AI group and 9 in the regular group). The percentage of correct answers with and without AI is shown in Figure 1.
- The correlation between AI usage frequency or answering medical questions (daily, monthly, etc.) and correct answers with AI (ϱ = 0.34, p = 0.26) showed a weak, non-significant positive correlation.
- We also asked residents to share their views on whether AI is a superior study tool compared to traditional methods, such as lectures. The results are shown in Figure 2.
- A moderate positive correlation was found between PGY level and correct answers without AI (ϱ = 0.53, p = 0.0057), indicating that higher PGY levels correlated with more correct answers without AI (Figure 3).

Figure 3. Correlation between PGY Level and Test Score



♦ CONCLUSION

Overall, while Artificial Intelligence shows promise as a supplemental tool in studying, its use should be approached with caution.