



# The Efficacy of ANKI-Based Flashcards in Enhancing Ophthalmic Knowledge Retention

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## Introduction:

- Conventional teaching methods - struggle to foster practical application and long-term retention.
- Learning resources - LaTeX, images, audio, and videos enhance learning experiences.
- ANKI: Spaced repetition system (SRS) program - reinforces learning



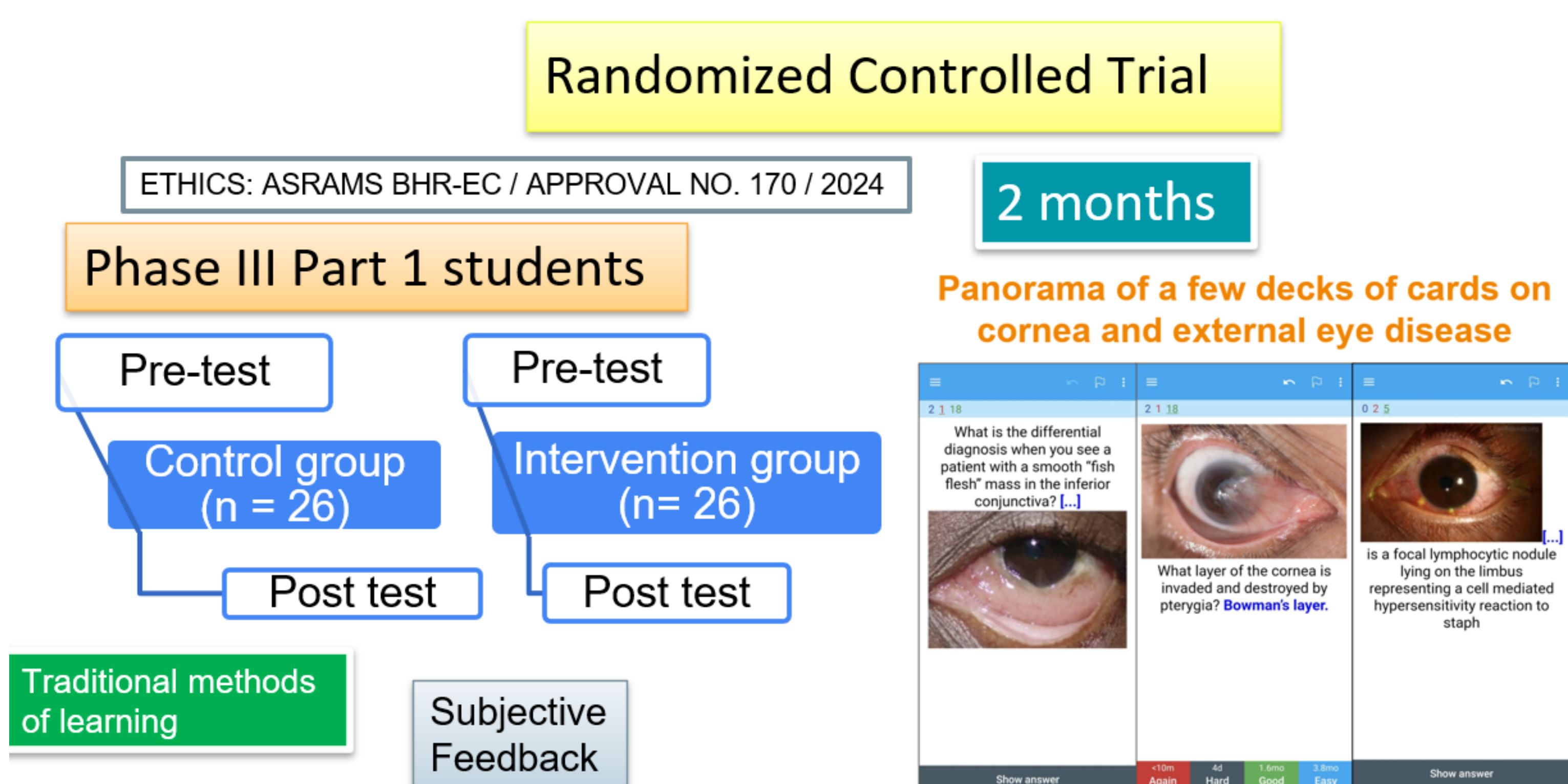
## Aim:

To evaluate the efficacy of ANKI, a spaced repetition system (SRS) software, in enhancing knowledge retention among Ophthalmology Phase III part 1 students.

## Objectives:

1. To assess the impact of ANKI-based flashcards on knowledge retention in Ophthalmology compared to traditional methods.
2. To evaluate the user experience and acceptability of ANKI among ophthalmology learners.

## Methodology:



### Data Analysis

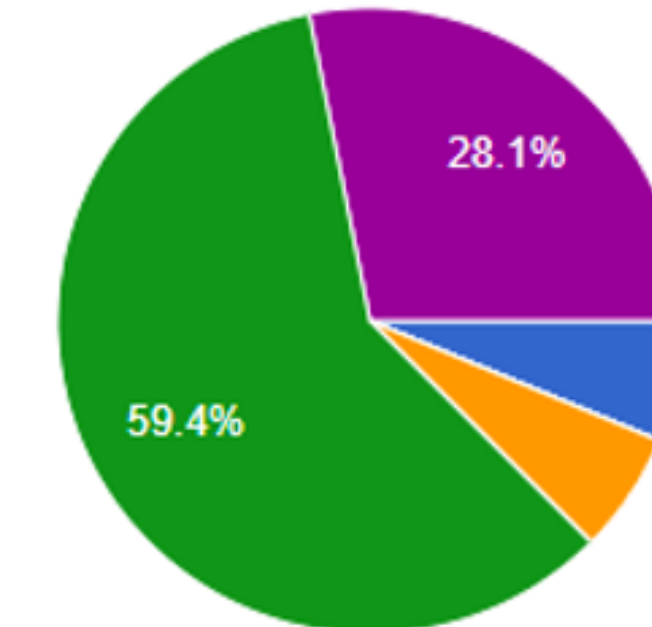
Microsoft Excel and Google Forms were used to collect and analyze the data. Independent sample t-test was applied to calculate the p-value. ( $\leq 0.05$  – level of significance)

## Results : Impact of Flash cards

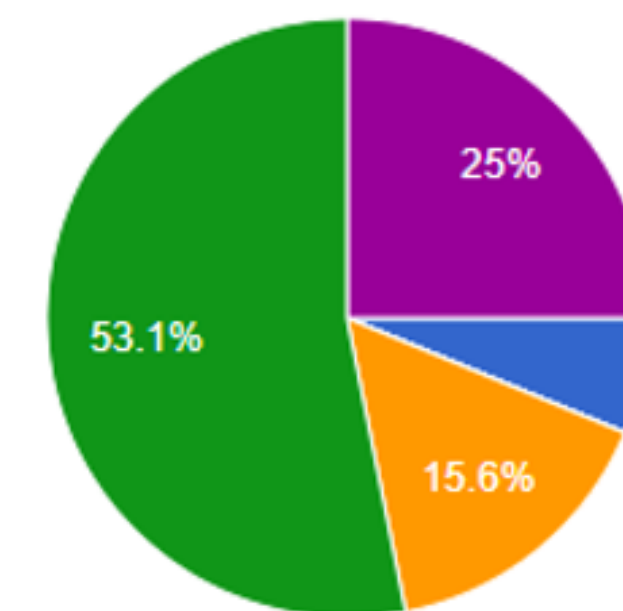
	Control group	Intervention group	P value (Effect size)
Mean score	45.58 (95% CI: 41.81-50.26)	53.19 (95% CI: 49.17-57.21)	0.0058, Cohen's d of 0.75 indicating a large effect size.

## Feedback:

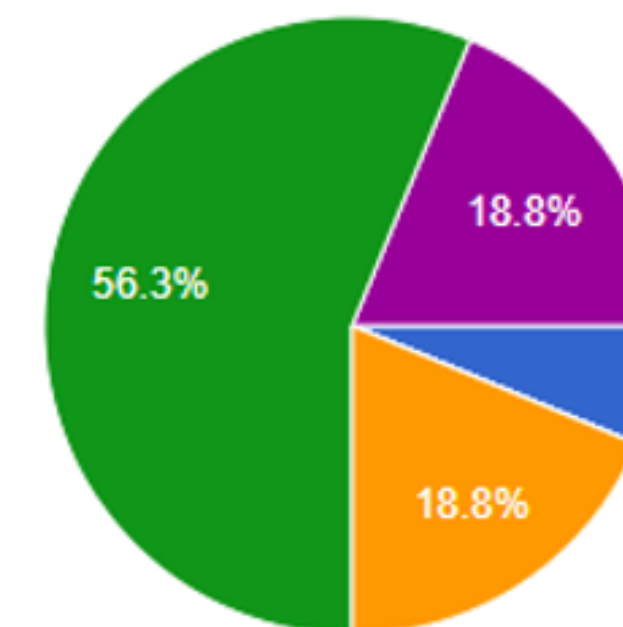
1. Anki Flashcards: Useful tool for our understanding of Ophthalmology



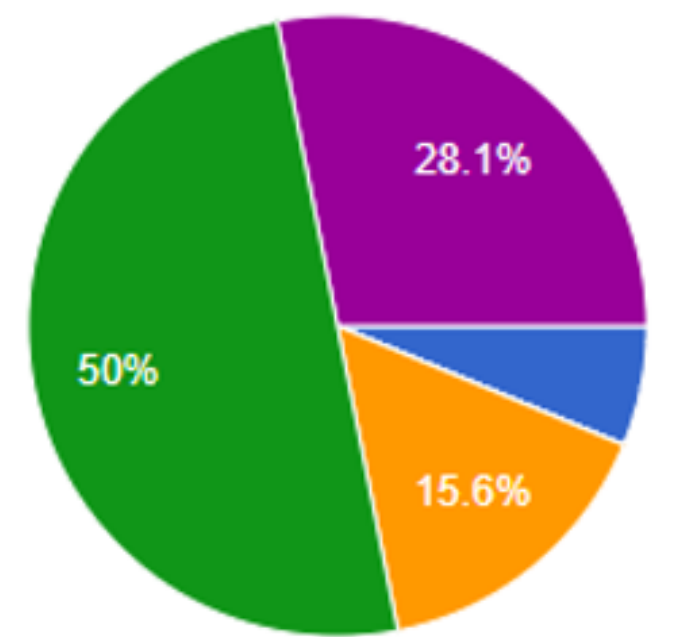
2. The software/app: Easy to use



3. Anki flash cards will help me improve my score in formative assessments



4. I would recommend this Anki flashcards as one method for learning



- Strongly disagree
- Disagree
- Neutral
- Agree
- Strongly agree



### Subjective feedback

Helpful for recall of knowledge and later implementation in practice

Useful modality of remembering tough topics

## Discussion :

**Jape, Zhou, & Bullock (2022), n = 100**

Personalized spaced-repetition approach is good for in-semester revision & long-term retention.

**Harris D M, Chiang M (2022), n = 60**

Incorporating ANKI by faculty into teaching to facilitate students' learning

### Our Study

Noticeable improvement in learning, comparable to other research.

## CONCLUSIONS & TAKE HOME MESSAGE

1. ANKI; Useful tool for knowledge retention as the educational paradigm shifts toward autonomous learning.
2. A well-designed digital flashcard is an efficient interactive spaced retrieval learning aid that can be created using open-source technology.

## References:

1. Jape D, Zhou J, Bullock S. A spaced-repetition approach to enhance medical student learning and engagement in medical pharmacology. BMC Med Educ. 2022;22(1):337.
2. Harris DM, Chiang M. An Analysis of Anki Usage and Strategy of First-Year Medical Students in a Structure and Function Course. Cureus. 2022;14(3):e23530.

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