

# Learning From Medication Errors: Impact of an Elective Course on How Students Approach Medication Safety

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## OBJECTIVE

To evaluate the resulting professional impact of interactive learning activities on medication safety among students.

## BACKGROUND

- Elective course 'Medication Safety and Humanity' offered to second-year pharmacy students (P2s)
- Course occurs prior to student completion of Objective Structured Clinical Examinations (OSCE) and Advanced Pharmacy Practice Experiences (APPE)
- Aims to supplement the 'Just Culture' concept promoted in health-systems.
- Course content consists of:
  - Presentations from interdisciplinary lecturers to share real-world medication safety experiences
    - Ex: Nurses, Physicians, and Law Professor
  - Pharmacist Interview Assignment
  - Journal Club
  - Discussions based on assigned readings

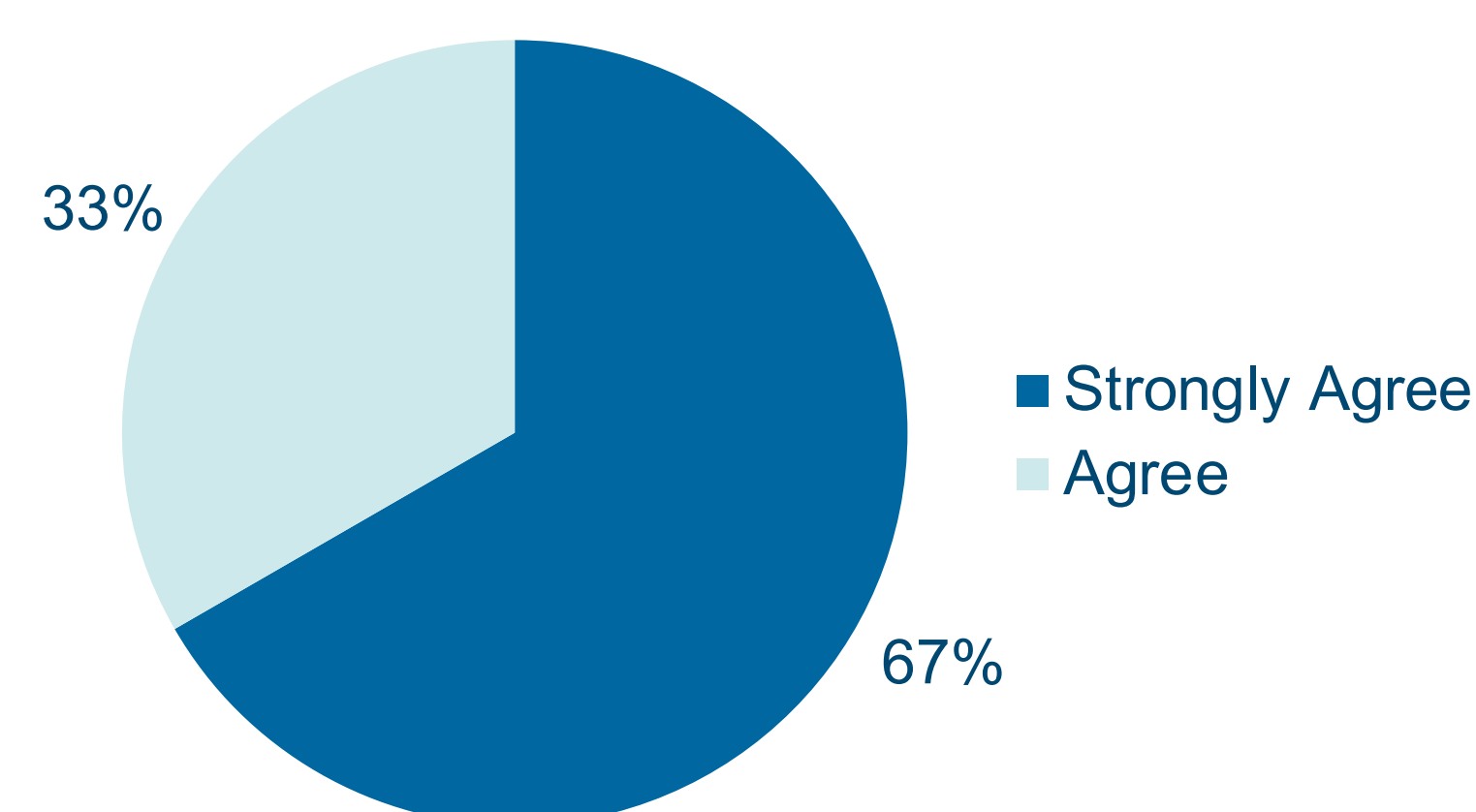
## METHODS

- An anonymous 16-item survey created in RedCap
- Distributed to all students who had taken the 'Medication Safety and Humanity' elective course between 2021-2023 (n=80)
- Participation in the study was voluntary and no incentives were offered
- Data was exported to Excel and descriptive statistics were performed to analyze findings
- This study was deemed quality improvement by the Medical University of South Carolina Institutional Review Board (IRB) and therefore was not subject to IRB review and approval

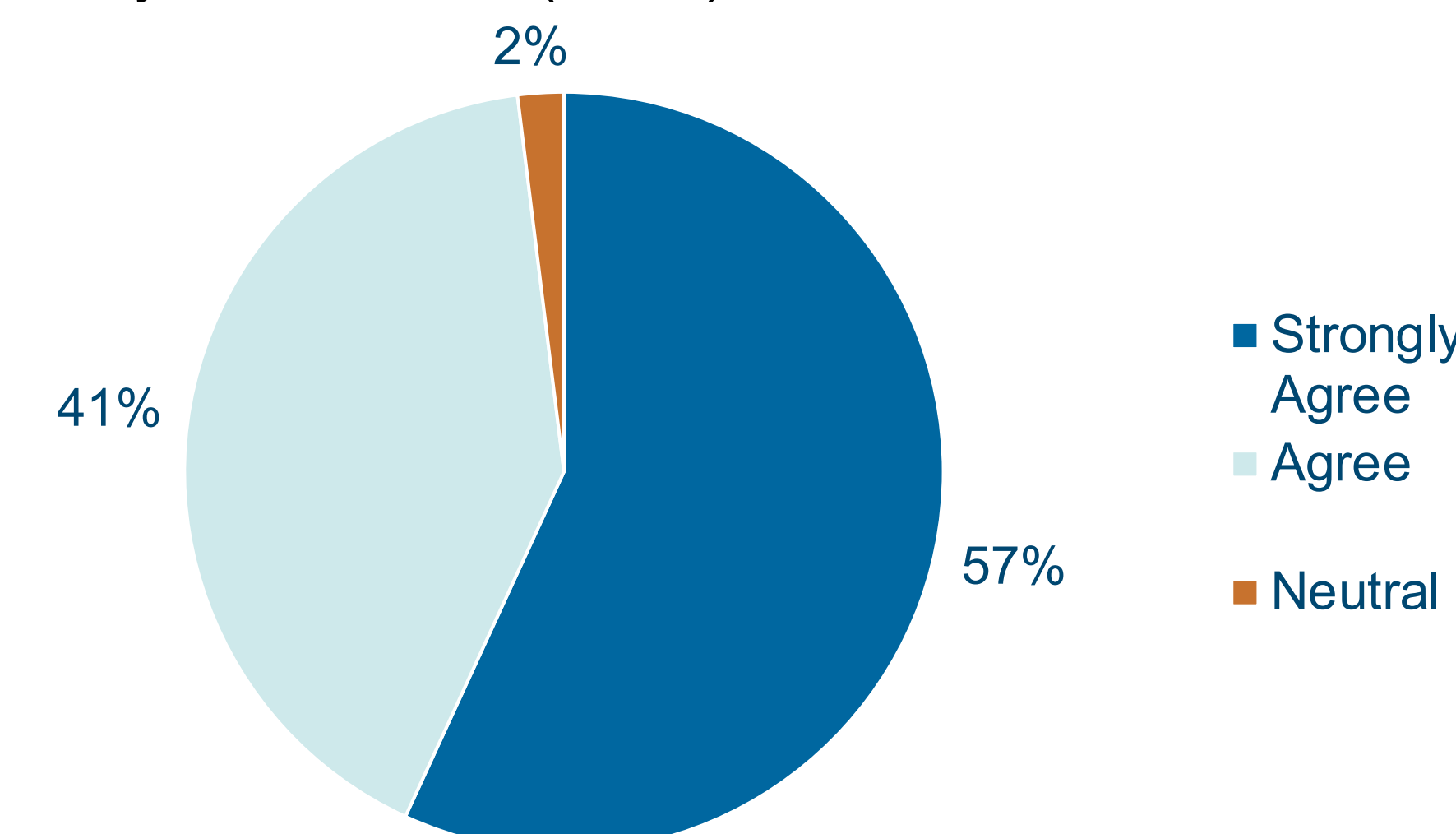
## RESULTS

A total of 52 students responded to the survey which led to an overall response rate of 65%.

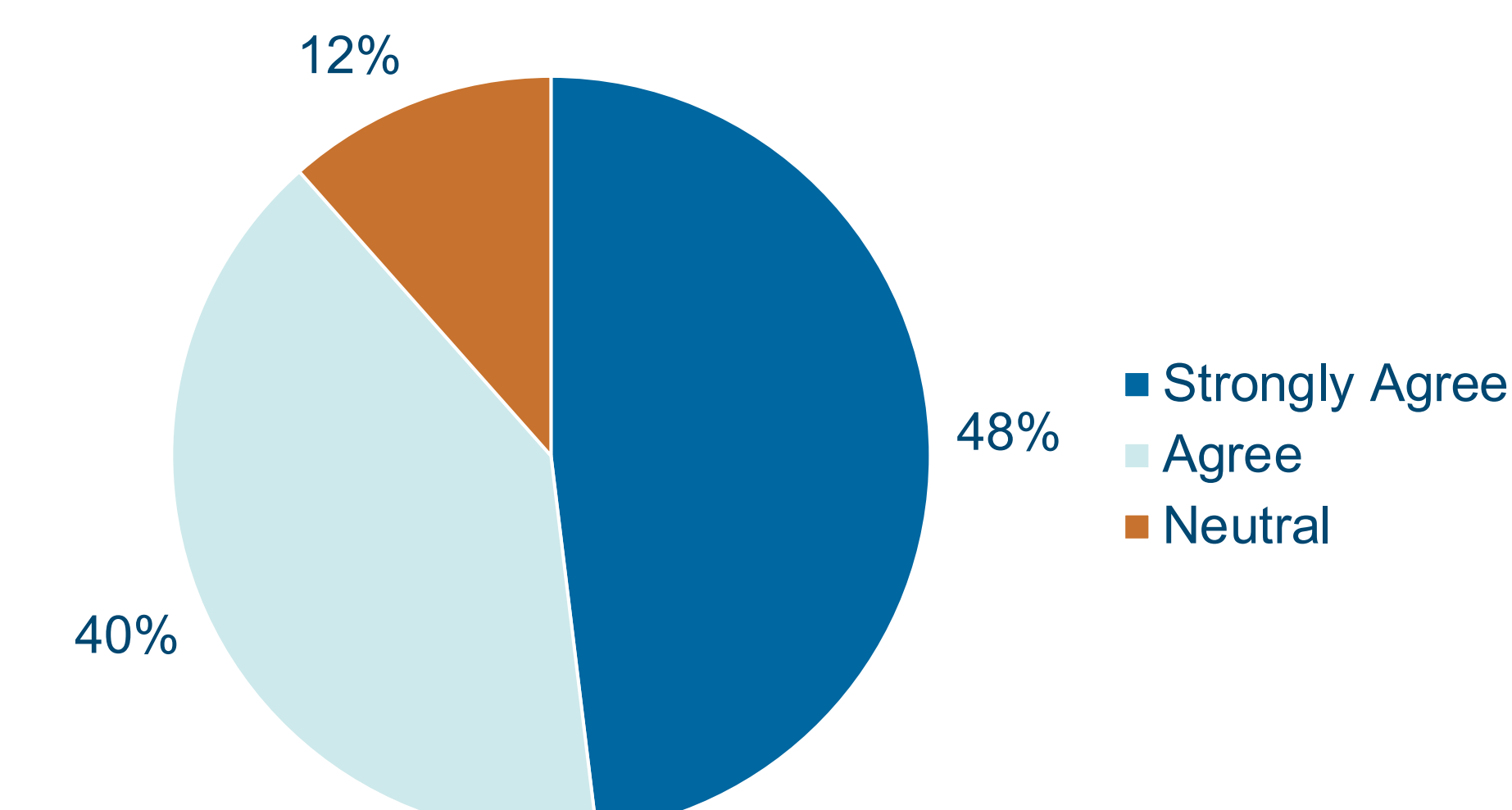
**Figure 1.** Do you feel like you have a better understanding of and appreciation for medication safety as a pharmacy student after this elective? (n=51)



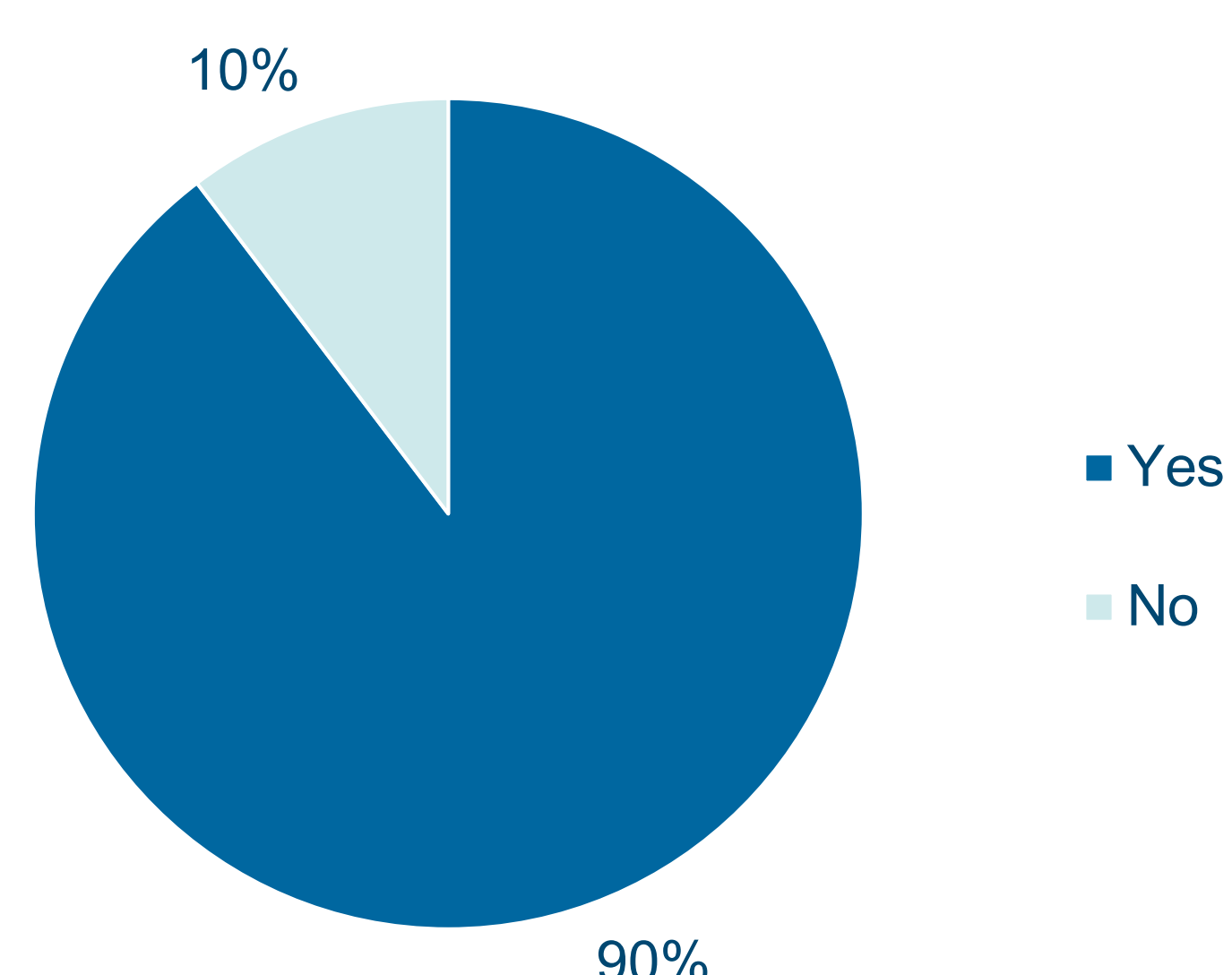
**Figure 2.** Do you believe that this course will change your professional practice as an intern and/or pharmacy technician? (n=51)



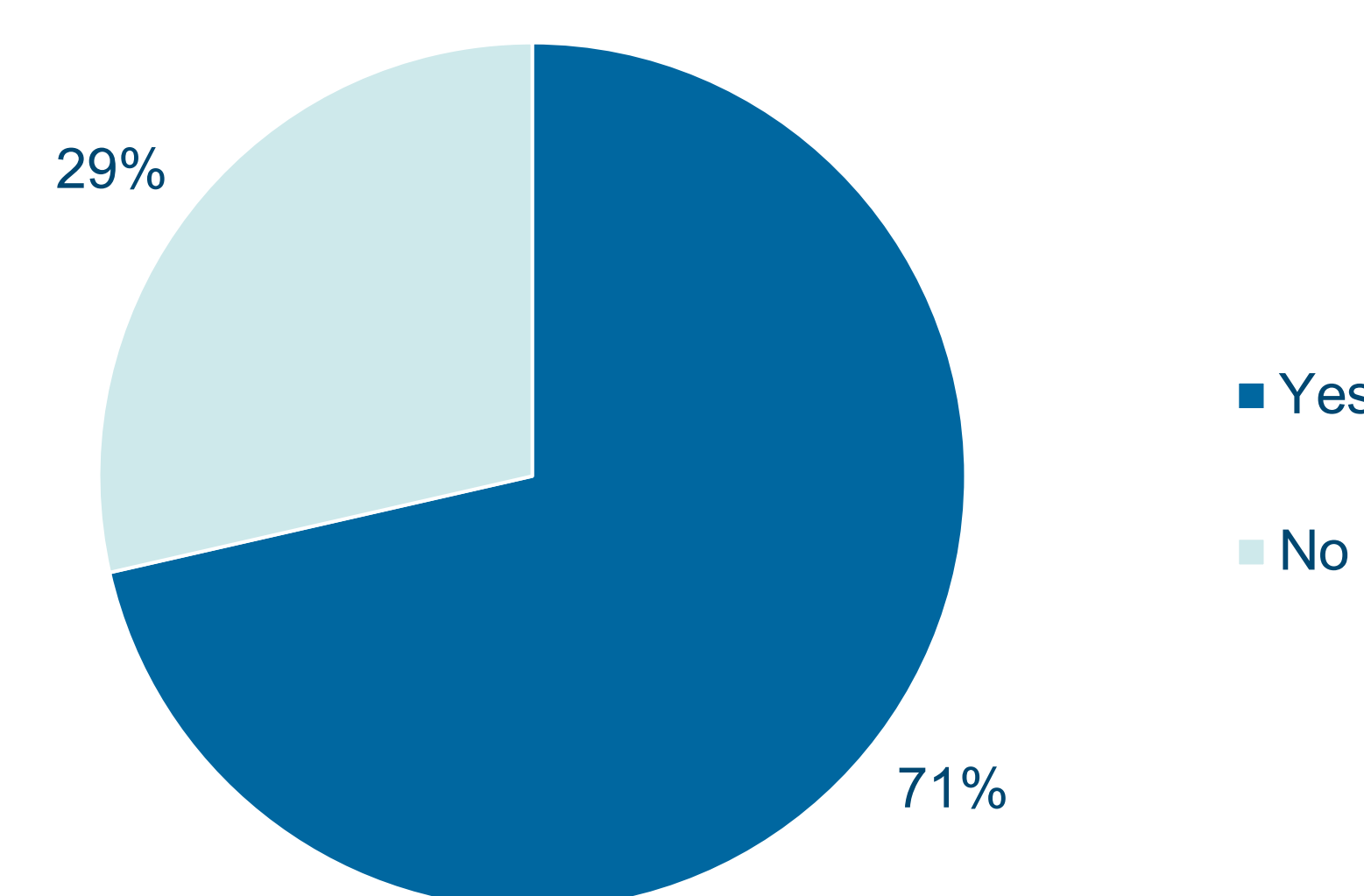
**Figure 3.** Do you feel that this course has impacted your work environment (internship/work/rotation)? (n=52)



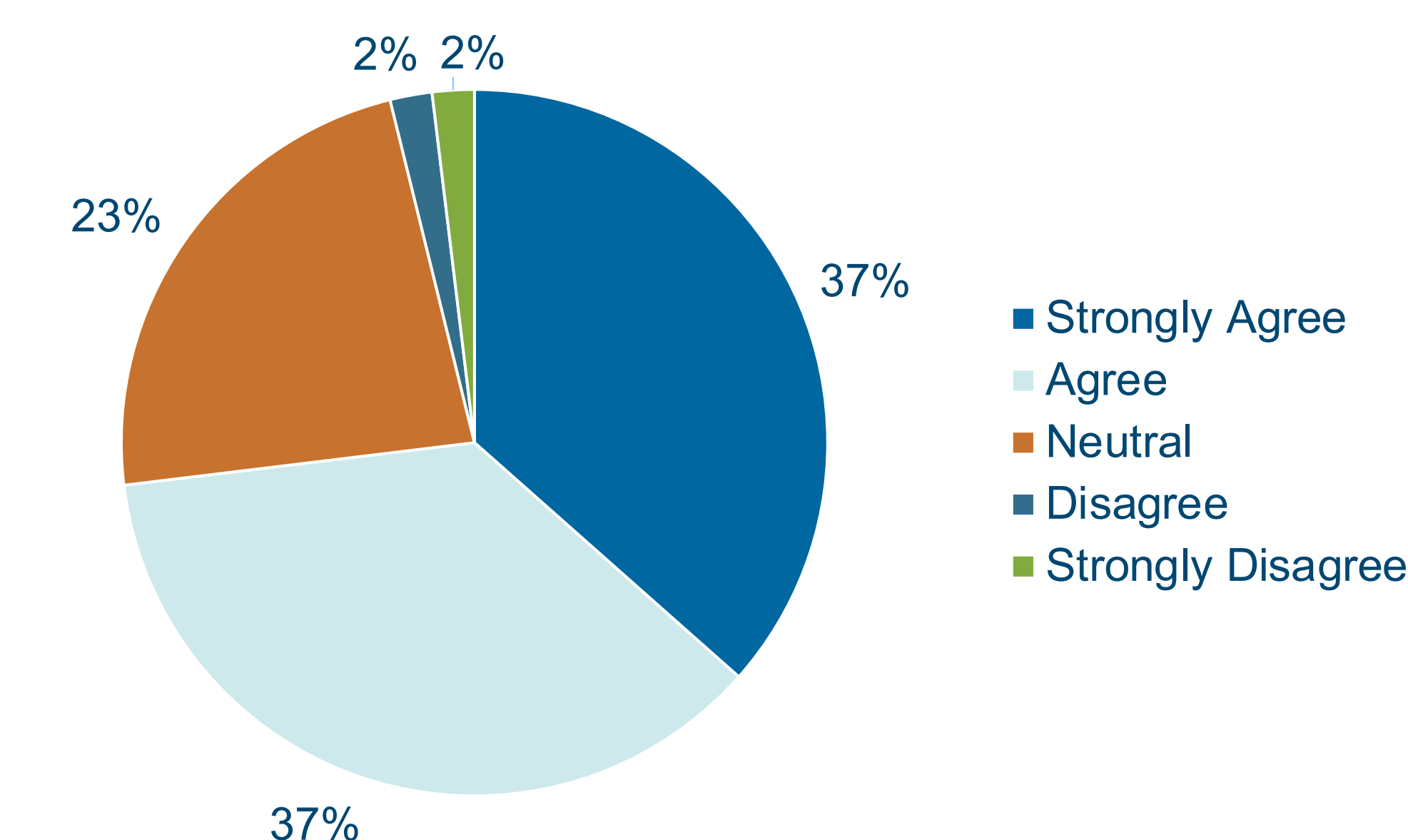
**Figure 4.** If you have witnessed a medication error in your work environment, has the course changed the way you evaluated the event and/or interacted with others about the event? (n=29)



**Figure 5.** For P4s only: Have you used your Medication Safety knowledge during APPE? (n=14)



**Figure 6.** Do you feel like the journal scan presentations helped to reinforce the content taught throughout the semester? (n=52)



## Limitations

- Small sample sizes for each cohort
  - Only open to P2s and is one of many electives they can choose from
- Lower response rates for previous cohorts (2021 and 2022)
  - Survey fatigue
  - Length of time between course completion and survey
- Various levels of exposure to work, internship, or APPE rotations

## CONCLUSIONS

- An elective course dedicated to medication safety can effectively prepare students before beginning practical training. The responses regarding the impact of the course were overwhelmingly positive and suggest that it can influence how students consider medication safety at work, internships, or during APPE rotations
- Future steps include the potential to create a similar but interprofessional course at our institution to strengthen collaboration between health sciences students
- Further quality improvement studies are needed to determine the impact of this course and similar electives on OSCE performance
- Additional data analysis will be conducted on data from the 2024 cohort

## REFERENCES

1. El-Awaisi A, Koummich S, Koraysh S, et al. Patient safety education in entry to practice pharmacy programs: A systematic review. *J Patient Saf* 2022;18:e373-e386.