

Educating Pharmacy Students with ADHD: The Impact of ADHD on Academic Performance and Student Satisfaction

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BACKGROUND

- Attention-deficit hyperactivity disorder (ADHD) is a prevalent and debilitating neuropsychiatric disorder that is associated with over-activity, inattention, and impulsivity with significant impairment and distress.¹
- Meeks, et al. has conducted some research on ADHD in medical students, but there is a significant lack of research conducted on the prevalence and impact of ADHD in students pursuing graduate level education, including pharmacy education.^{2,3}
- It is hypothesized that pharmacy students with ADHD have a preferred learning method that is different from students without ADHD.

OBJECTIVE

To evaluate the role that ADHD has on pharmacy student performance, satisfaction, and preferred learning methods.

METHODS

- 54-item electronic survey created in RedCap
- Distributed via email to all students from the College of Pharmacy at the Medical University of South Carolina (MUSC)
- Students currently enrolled in the program included 1st through 4th-year students
- Participation was encouraged through in-class time and announcements
- The study was voluntary, no incentives were offered to students, and investigators were blinded to the identity of participants
- This study was approved as exempt by the MUSC Institutional Review Board (IRB)
- The survey instrument was developed by a multidisciplinary team including one PharmD student, one College of Pharmacy faculty, and a liaison librarian, and pilot-tested
- Data was analyzed and Chi-Square tests were run using SPSS version 28 and Microsoft Excel

RESULTS

Our survey had a response rate of 65.7% (n=176/268)

- 19% (n=33/172) had an official ADHD diagnosis (defined as one given by a licensed psychologist, psychiatrist, or physician)
- An additional 32% (n=44/139) who do not have an official diagnosis self-identified as thinking they have ADHD
- 39% (n=13/33) of students with ADHD have remediated at least one course versus 18% (n=24/137) without ADHD ($p=0.006$)
- Only 36% (n=12) felt comfortable revealing their diagnosis to their professors and only 33% (n=11) felt comfortable revealing their diagnosis to program administrators

Figure 1. Preferred Learning Methods* (n=170)

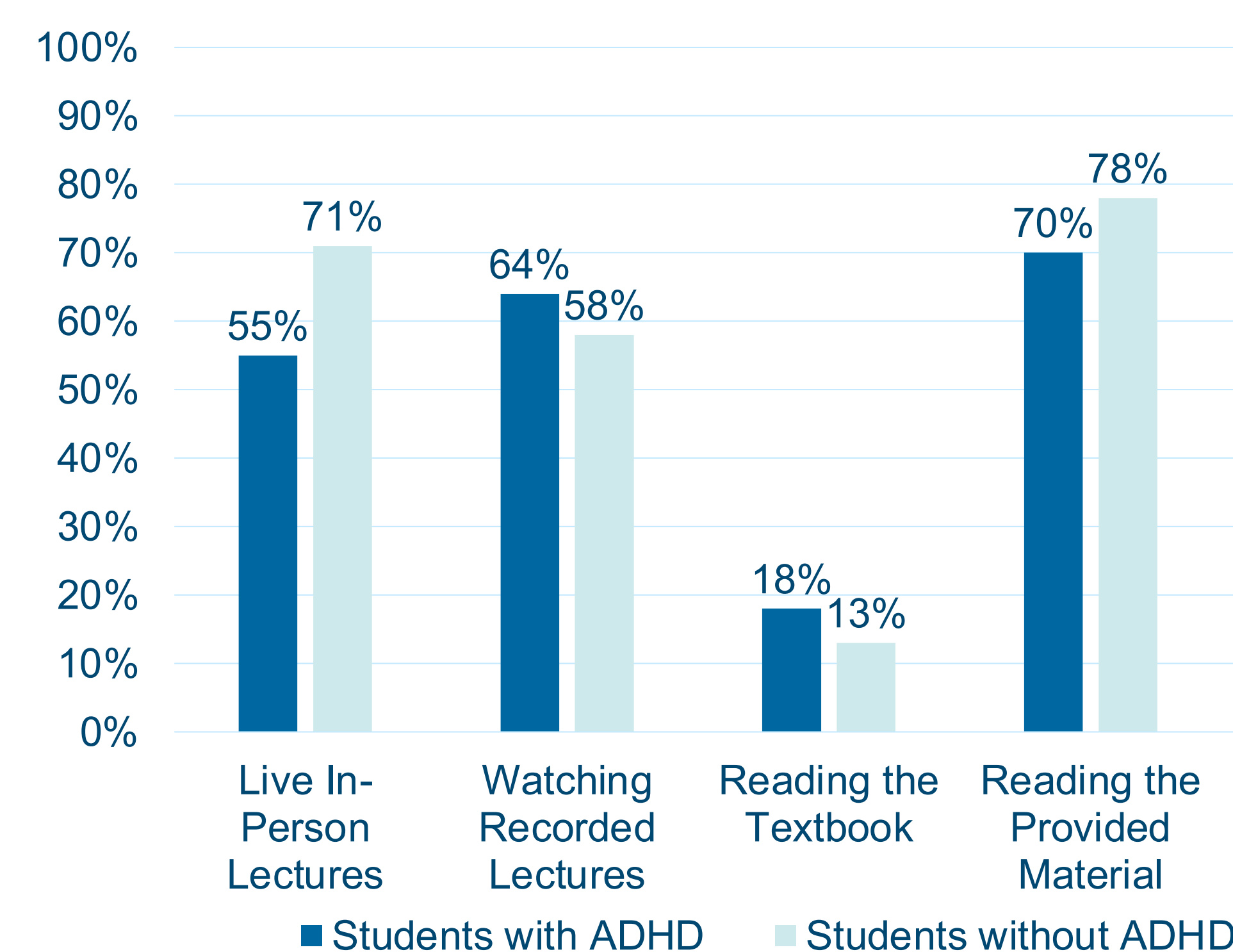


Figure 2. Course Remediation Rate* (n=170)

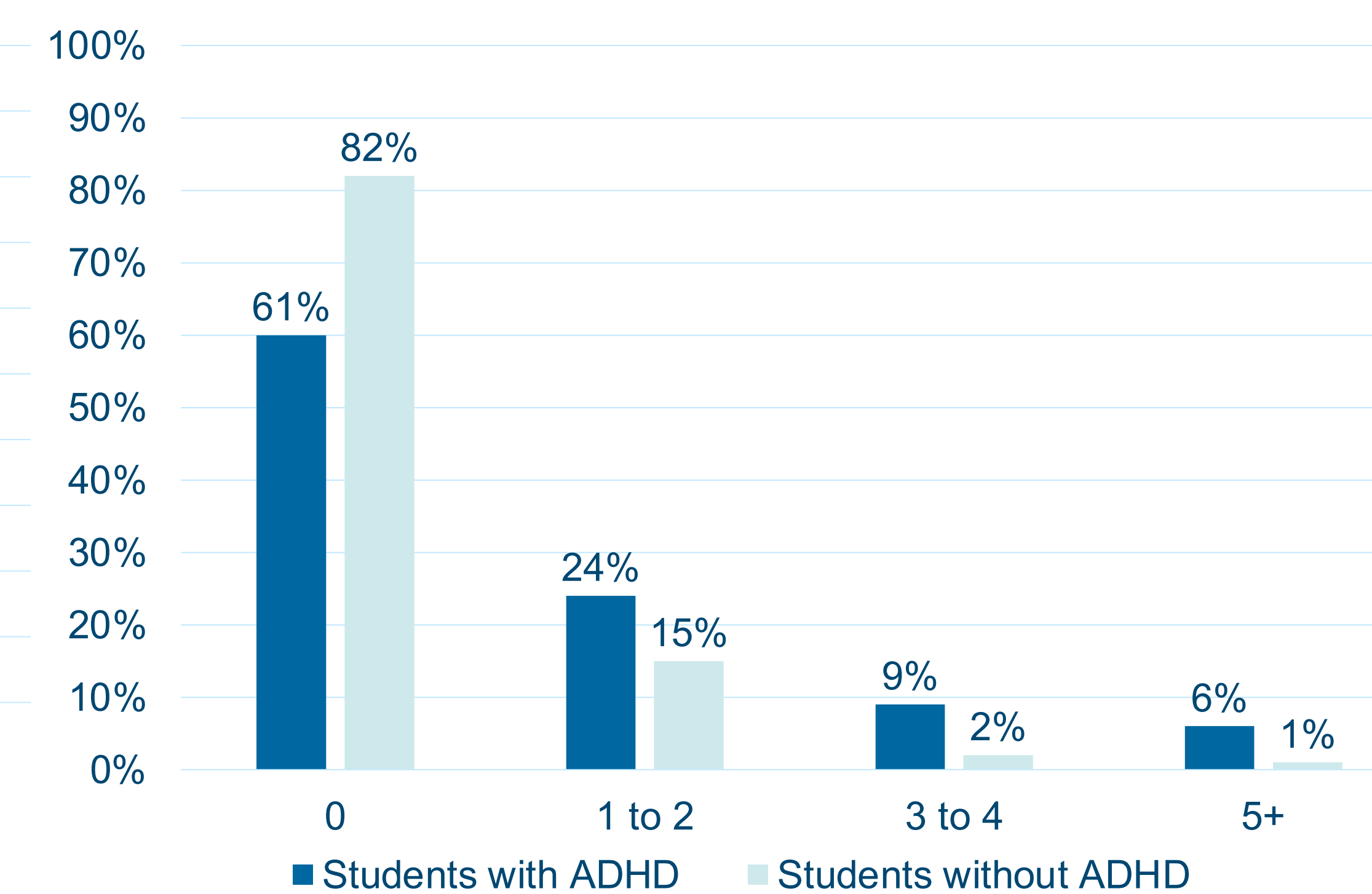
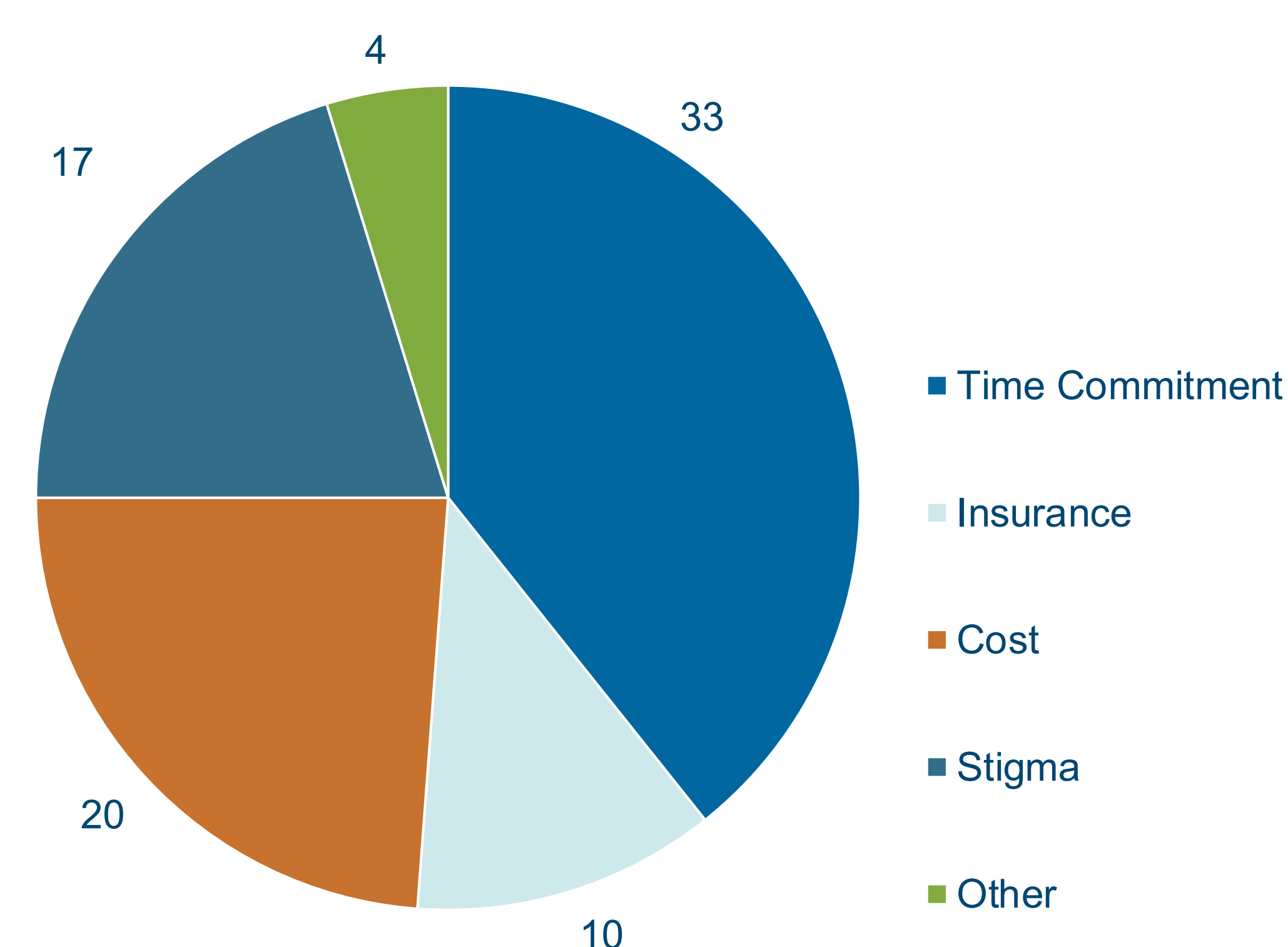


Figure 3. Barriers to Diagnosis* † (n=44)

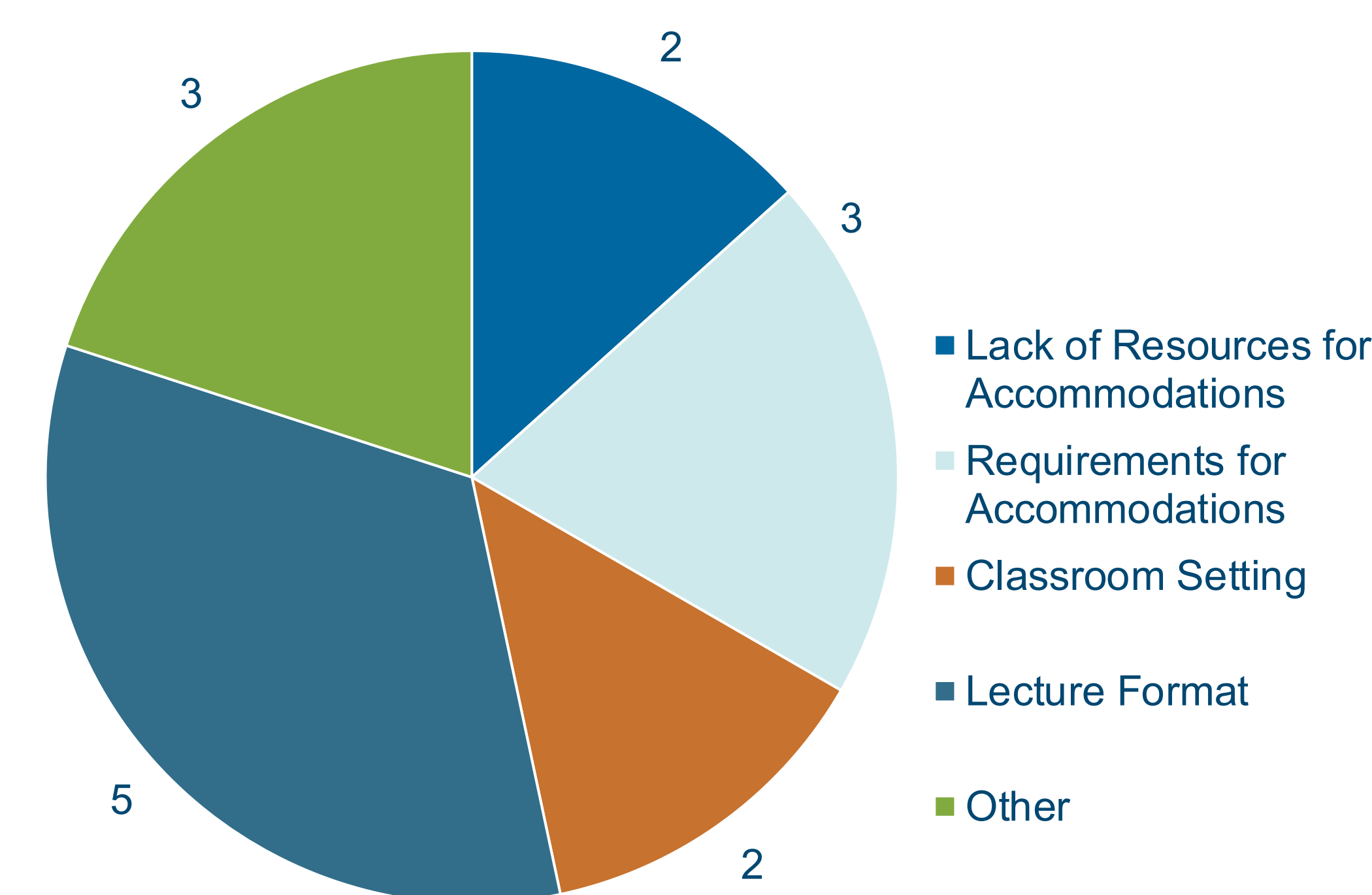


*select all that apply question

†only answered by students who do not have an official diagnosis but suspect they have ADHD

‡answered by students who identified as having ADHD

Figure 4. Specific Barriers to Program Satisfaction ‡ (n=12)



CONCLUSIONS

- No obvious difference in preferred learning methods and strategies could be identified between the study groups, but there may be a trend in the live in-person lecture preference
- Due to the barriers encountered by students in receiving an ADHD diagnosis, and reluctance to share their diagnosis, pharmacy educators must recognize ADHD may be more prevalent than reported accommodations
- Difficulty obtaining academic accommodations can impact student performance and therefore may increase the likelihood of remediation
- It is important to incorporate a variety of preferred learning methods and strategies that will benefit all students, including those with ADHD
- Future projects should evaluate how learning methods could influence performance and student satisfaction

LIMITATIONS

- Survey was conducted at the end of the Fall semester and does not account for Spring semester remediation
- Self-reporting nature of the project regarding the documented diagnosis
- The survey does not account for the severity of ADHD of the participants

REFERENCES

- Leffa DT, Caye A, Rohde LA. ADHD in Children and Adults: Diagnosis and Prognosis. *Curr Top Behav Neurosci*. 2022;57:1-18. doi:10.1007/7854_2022_329
- Meeks LM, Plegue M, Swenor BK, et al. The Performance and Trajectory of Medical Students With Disabilities: Results From a Multisite, Multicohort Study. *Acad Med*. 2022;97(3):389-397. doi:10.1097/ACM.0000000000004510
- Meeks LM, Case B, Plegue M, Moreland CJ, Jain S, Taylor N. National Prevalence of Disability and Clinical Accommodations in Medical Education. *J Med Educ Curric Dev*. 2020;7:2382120520965249. Published 2020 Oct 20. doi:10.1177/2382120520965249