FROM TO ATTEND OR NOT TO ATTEND TO I WISH I COULD ATTEND: STUDENT MOTIVATION FOR ATTENDANCE IN THE BAYLOR COLLEGE OF MEDICINE PHYSICIAN ASSISTANT PROGRAM DURING A GLOBAL PANDEMIC

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INTRODUCTION

Attendance in a Virtual World:
- Minimal research on attendance and motivation in PA students exists
- Research in medical students found common factors that determine attendance included previous +/- experience with the lecturer, student-predicted outcome and benefit of attending class, and their considerations and preferences (i.e., teaching vs. learning style, early morning classes)
- A global pandemic necessitated a pivot to virtual learning, highlighting the importance of understanding motivation for attendance in a virtual environment
- The pandemic also provided an opportunity to learn about students' learning-environment preferences and whether preferences aligned with specific courses or types of classes
- Finally, it is imperative to evaluate whether virtual learning impacts students' self-efficacy related to specific expected outcome competencies

Previous Projects:
- "Teaching to An Empty Classroom: Qualitative Analysis of Student Motivation for Attendance in the Baylor Physician Assistant Program" involved qualitative interviews with subsequent analysis using the Theory of Planned Behavior to categorize statements into "attitudes," "social norms," and "perceived behavioral controls"
- To Attend or Not to Attend: Student Motivation for Attendance in the Baylor . . . Program" involved a quantitative study of motivation for attendance for three cohorts at different time points in their education

OBJECTIVES

- To perform a quantitative analysis of student motivation and attendance specific to virtual classes and determine factors that affect motivation
- To determine instructional method preferences by course and self-efficacy by competency for a cohort of students who completed their didactic education almost entirely virtually.

METHODS

Study Design:
- Quantitative analysis of survey item results from the 2020-2022 (n=28) BCM PA cohort, who attended most of their didactic classes virtually due to the impact of the Sars-coV-2 global pandemic
- Contained a brief demographic section (i.e., age, ethnicity, GPA)
- A survey utilized Likert scales and asked students
  - about their motivation for attendance
  - about the preferred instructional method for concentration, asking questions, and in general
  - about the preferred instructional method for specific courses
  - about confidence to perform specific PA student competencies
- The survey was distributed in person to the 2020-2022 cohort

Participant Selection:
- Participants were current students in the physician assistant program at BCM who had just completed their didactic year
- Participation was entirely voluntary and anonymous

Data Analysis:
- Descriptive statistics including measures of frequency, central tendency, variation, and position
- Independent-Samples Mann-Whitney U Test to compare individual motivation items by gender

RESULTS

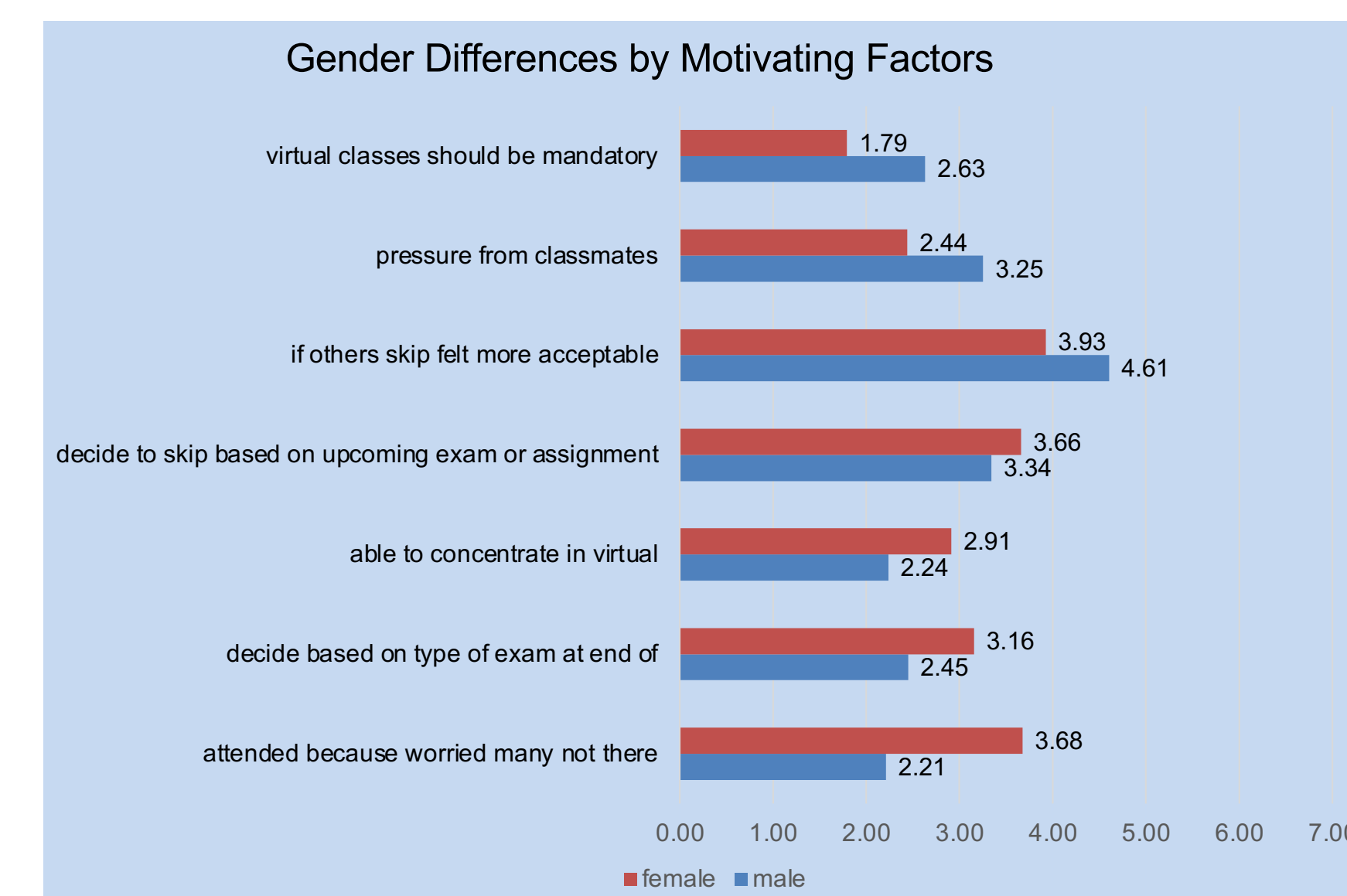| Table 1. Demographics		
Gender	n (28)	% (100)
male	4	82
female	23	14
no answer	1	1
Ethnicity	n (28)	% (100)
asian	6	21
black	1	4
caucasian	19	68
hispanic/latinx	2	7
Age	N (27)	% (96)
average	25.82 (+/-3.15), range 23-34	
GPA	N (15)	% (54)
average	3.68 (+/-0.234), range 3.2-3.9	

*28 of 40 possible respondents = 70% response rate

Figure 1. Gender Differences by Motivating Factors (1 to 7 w/ 1 = extremely untrue to 7 = extremely true); p<0.05 for each statement above
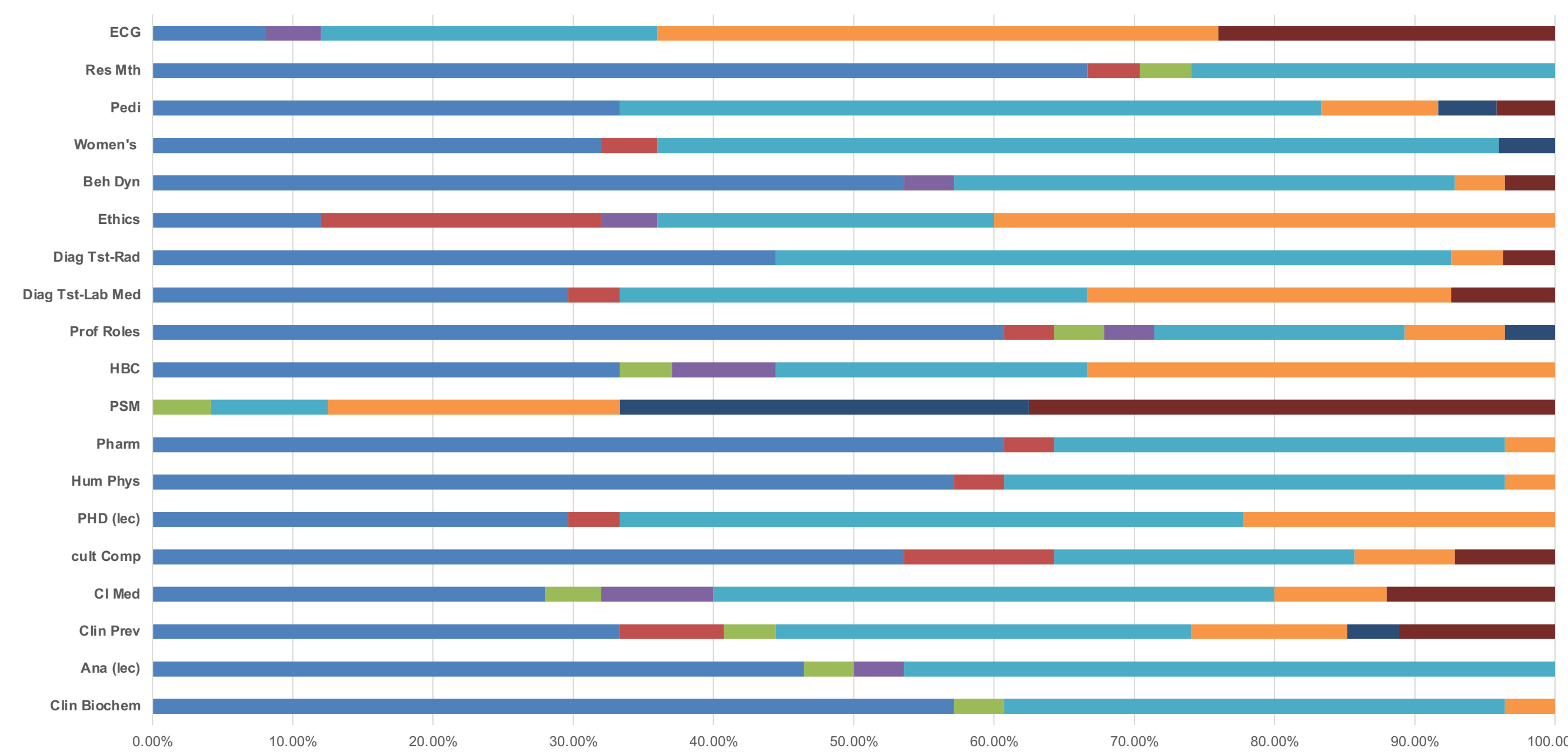

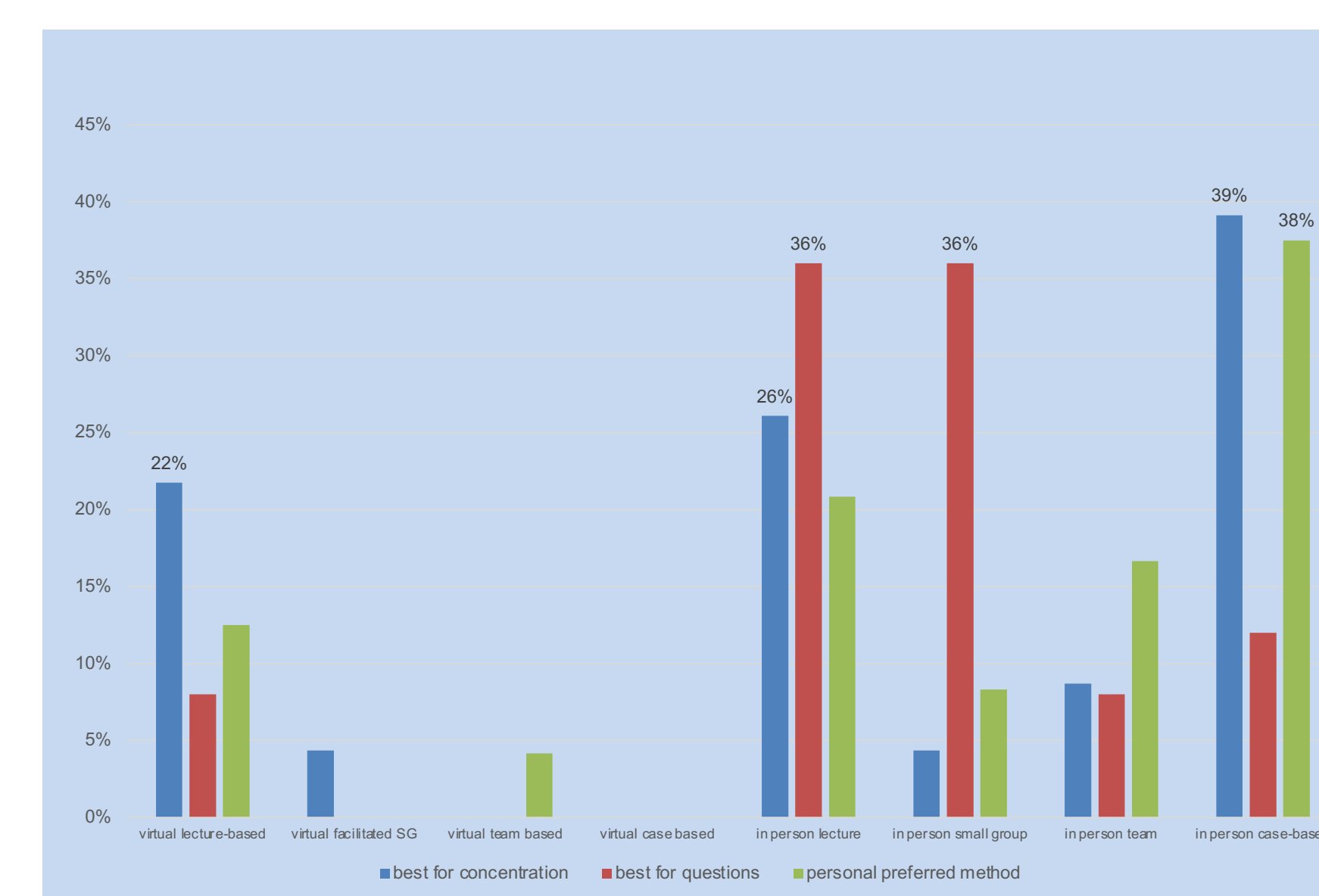Figure 2. Preferred Delivery Method by Course

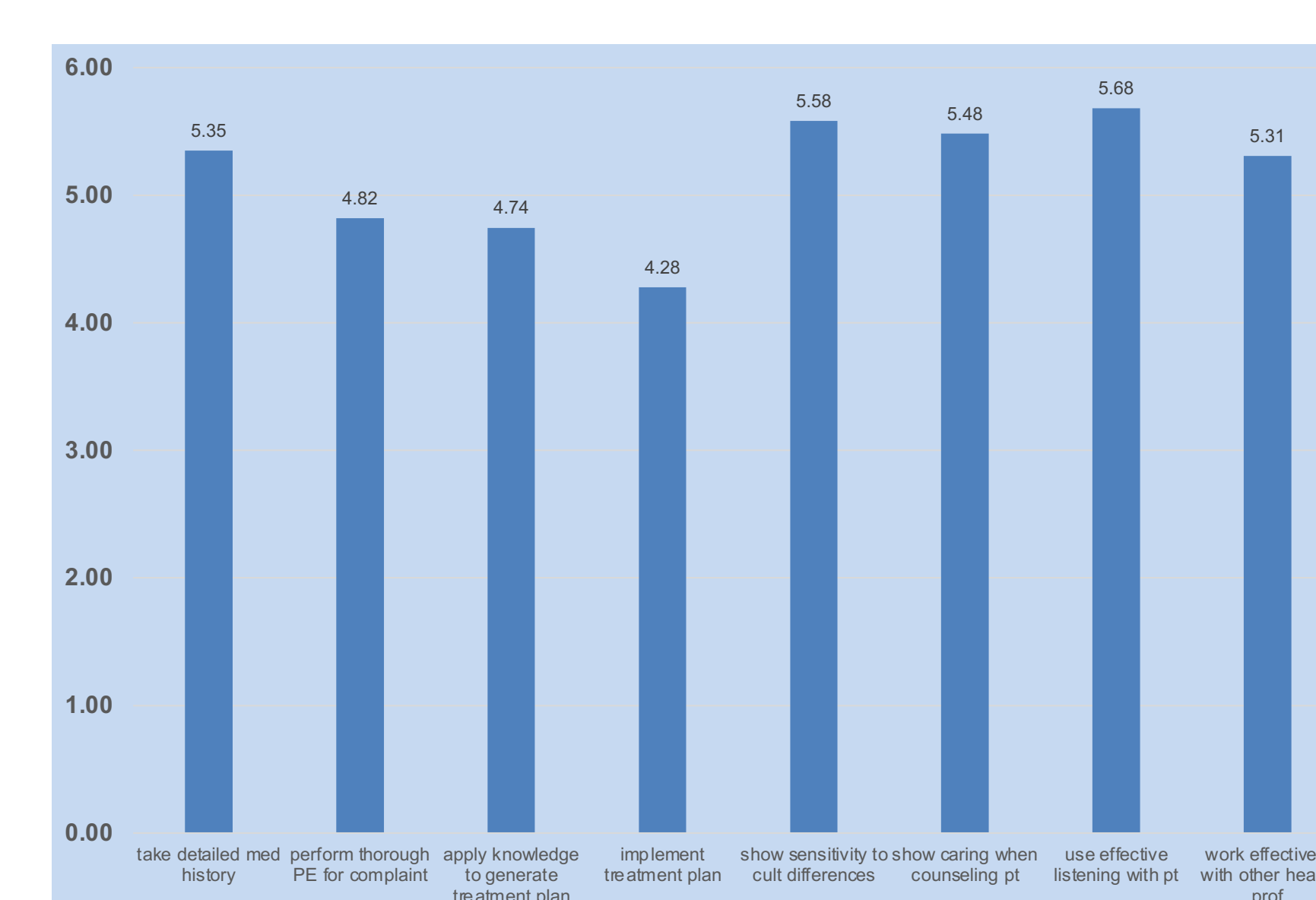Figure 3. Delivery Method Preferences for Concentration, Asking Questions and Overall Preference

Figure 4. Confidence by Competency (1=extremely unconfident to 7 = extremely confident)

- All courses together, students endorsed preference for two methods—virtual lecture-based learning (40%) and in-person lecture-based learning (33%).
- The remaining methods were endorsed less, from 2% to 12% of the time
- The highest percentage preference for virtual lecture-based learning was for Research Methods (66.67%), Professional Roles (60.71%), Pharmacology (60.71%), Human Physiology (57.1%), and Clinical Biochemistry (57.1%)
- Women's Health and Pediatrics indicated the strongest preference for in-person lectures at 60% and 50%, respectively
- While not highly endorsed for other classes, in-person case-based, team-based, and facilitated small group was most often supported for Problem Solving in Medicine, Medical Ethics, and Health Behavioral Counseling
- Analyzing the motivation for attending virtual classes revealed high student agreement with "attending all scheduled virtual classes is important to me" and "virtual class required more self-discipline and self-directed learning"
- Seventy-one percent rarely (<10%) indicated skipping virtual class, while 57% indicated they "occasionally (30% of the time)" felt like they wasted time attending virtual class. This was significantly different from previous cohorts who indicated they "sometimes (50% of the time)" felt like they wasted time attending class

DISCUSSION

Significant Differences in Motivation by Gender:
- ❖ Female students are more likely than males to skip based on an upcoming assignment, attend based on the type of exam in the course, and attend because they are worried many won't be there
- ❖ Female students are more able than male students to concentrate in a virtual class
- ❖ Male students are more likely than females to attend based on pressure from classmates and feel it is more acceptable to skip if others skip
- ❖ Male students are more likely to believe virtual classes should be mandatory

Instructional Method Preferences:
- ❖ Virtual lecture-based, in-person lecture-based, and in-person case-based methods are endorsed most highly as the "best method for concentration."
- ❖ In-person lecture-based and in-person small group methods are supported as the best methods for asking questions
- ❖ Overall, students prefer the in-person case-based instructional method the most, followed by in-person lecture-based and virtual lecture-based
- ❖ As figure 2 demonstrates, student instructional method preferences are different for specific courses

Self-efficacy (confidence by competency)
- ❖ Preliminary data indicates this student cohort's mean confidence by competency ranges between neutral (4) and very confident (6)
- ❖ The ability to complete a thorough physical exam for a complaint was lower than anticipated and thus important to compare with future cohorts who received physical examination instruction in person

Limitations:
- ❖ Survey with set statements → no open answer section
- ❖ Single cohort with unique situation → PA-S1 cohort just completed didactic year almost entirely virtually
- ❖ Potential selection bias → is given in person on "mandatory" days but still might favor those motivated to attend class.

CONCLUSIONS

- ❖ Physician assistant students believe daily attendance is essential, even with virtually held classes
- ❖ They often feel "over-scheduled"
- ❖ Interestingly, **students feel like they wasted time attending virtual class up to 30% of the time, down from 50% for the three previous cohorts who attended class in person.**
- ❖ Students preferred a lecture-based format for most classes regardless of in-person or virtual delivery.
- ❖ Students indicated a preference for in-person small-group learning for specific classes
- ❖ Overall, students felt most confident "using effective listening skills when talking to a patient"
- ❖ Future studies should compare physical examination self-efficacy for a cohort who attended that course in person
- ❖ Future studies should track student preferences over time as instructional methods change
- ❖ Faculty should consider student preferences when planning instructional methods for courses—some may not be as faculty would expect