



Promoting APPE-Readiness and Critical Thinking with Verbal Justification of Treatment Recommendations for Patient Cases

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INTRODUCTION

- Schools of pharmacy are tasked with preparing students for Advanced Pharmacy Practice Experiences (APPEs) and clinical practice.
- Curricular Outcomes and Entrustable Patient Activities (COEPAs) indicate that in order to effectively communicate with preceptors and other healthcare providers, students should be able to make individualized treatment recommendations and be able to understand and explain the rationale behind the recommendations (clinical reasoning).¹
- The use of appropriate terminology to communicate with patients vs. healthcare providers is an important skill for pharmacy students for APPEs and clinical practice.²

OBJECTIVES

- The objectives of this study were to:
 - Implement a verbal justification component to patient cases to prepare students for APPEs
 - Assess student perceptions of the verbal justification activities

METHODS

- This IRB-approved study was conducted in fall 2023 and spring 2024.
- Third-professional-year students completed six individual written patient cases in integrated systems-based therapy (SBT) courses.
- Immediately following each written patient case, students individually met with a facilitator to verbally justify their treatment recommendations for the patient's primary problem.
- Students had 5 minutes to justify their recommendation and were evaluated using a standardized rubric (Figure 1).
- Following each verbal justification activity, students completed a post-survey with their perceptions and comfort level in using medical terminology and justifying their recommendations.
- Descriptive statistics and Kruskal-Wallis tests were used to analyze data.

METHODS

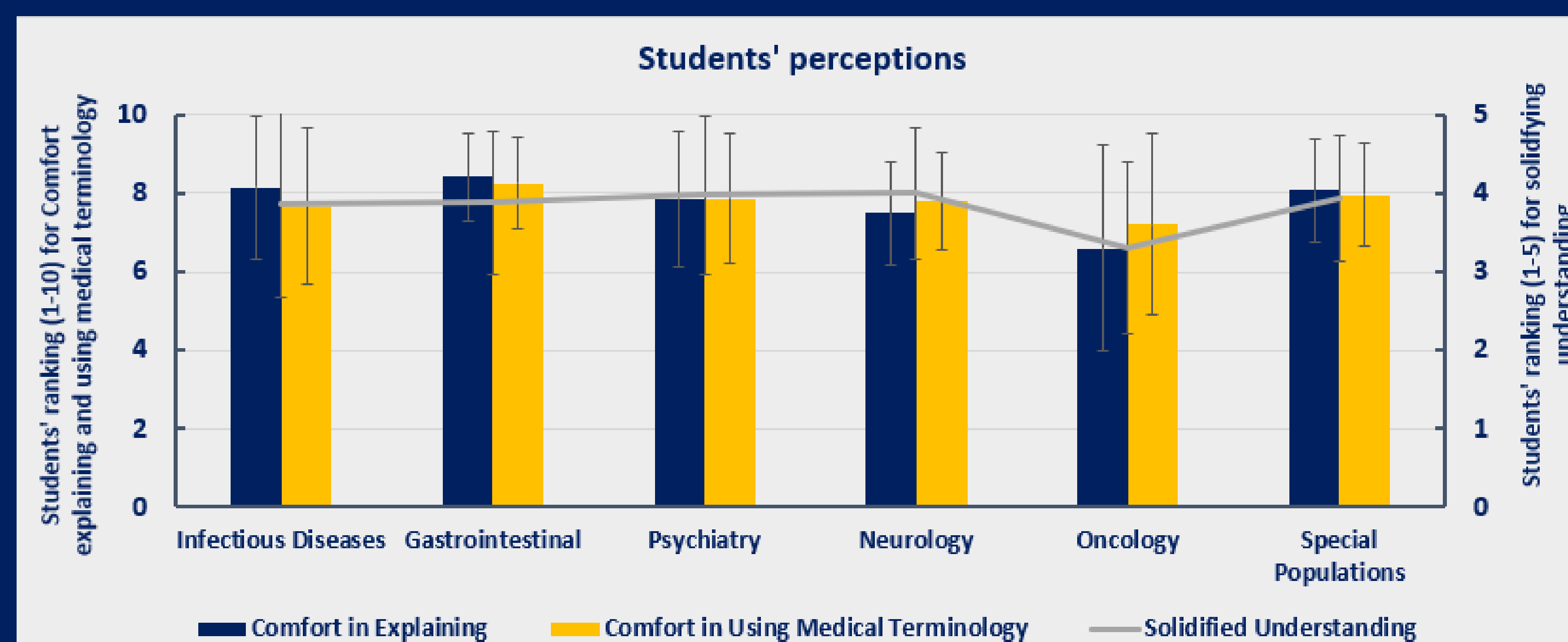
- Faculty coordinators developed a facilitator's guide for each patient case with key points that should have incorporated into their verbal justification. The rubric item "The student appropriately justifies the reason for their recommendation(s)" were evaluated by:
 - Completed: 75-100% of key points were included in the student's justification
 - Partially Completed: 50-74% of the key points were included in the student's justification
 - Not Completed: <50% of the key points were included in the student's justification

Figure 1. Assessment Rubric

Criteria	Completed	Partially Completed	Not Completed
The student appropriately justifies the reason for their recommendation(s).	1	0.5	0
The student explanation uses appropriate medical and scientific terminology.	1	0.5	0
The student speaks with a clear voice, confidence and appropriate tone.	0.5	0.25	0
The student maintains appropriate eye contact.	0.5	0.25	0

RESULTS

Figure 2. Average Scores on Verbal Justification Component of Patient Cases



*Survey questions on a scale of 1-10, with 1 = very uncomfortable and 10 = very comfortable.
**Survey question on a scale of 1-5, with 1 = strongly disagree and 5 = strongly agree.

RESULTS

- Forty-five students completed six verbal justification activities.
- Thirty-four students (75.6%) completed all post-surveys. Results are shown in Figure 2 and Table 1.
- After completing the first verbal justification activity:
 - 88% of students reported that similar activities should be incorporated throughout the curriculum
 - 78% of students reported being prepared to justify recommendations to a healthcare provider or preceptor.

Table 1. Average Scores on Verbal Justification Component of Patient Cases

Course	Case Content	Average Score
Infectious Diseases	Community Acquired Pneumonia	2.85
Gastroenterology	Peptic Ulcer Disease	2.66
Psychiatry	Major Depressive Disorder	2.78
Neurology	Epilepsy	2.82
Oncology	Breast Cancer	2.56
Special Populations	Urinary Incontinence	2.78

Scores ranged from 1-3 points based on the rubric shown in Figure 1.

CONCLUSION AND IMPLICATIONS

- By providing an opportunity for students to apply foundational knowledge to clinical recommendations, use critical thinking skills and communicate with simulated preceptors to provide patient-centered care, these activities align with the COEPAs.
- Scores and perceived comfort in explaining recommendations and using medical terminology were high overall, with a slight decrease on particular content, which indicates that additional formative activities may be beneficial for more challenging topics, including oncology.
- Similar activities can be implemented to improve student comfort and promote APPE-readiness.

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