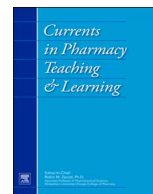


Contents lists available at [ScienceDirect](https://www.sciencedirect.com)

## Currents in Pharmacy Teaching and Learning

journal homepage: [www.elsevier.com/locate/cptl](http://www.elsevier.com/locate/cptl)

## Research Article

# Student performance on a knowledge-based exam may predict student ability to communicate effectively with a standardized patient during an objective structured clinical examination

Chris Gillette<sup>a,\*</sup>, Robert B. Stanton<sup>a</sup>, H. Glenn Anderson Jr.<sup>b</sup><sup>a</sup> Marshall University School of Pharmacy, Huntington, WV 25755<sup>b</sup> Marshall University School of Pharmacy, 1 John Marshall Dr., Huntington, WV 25755

## ARTICLE INFO

**Keywords:**Objective structured clinical exam  
Patient counseling

## ABSTRACT

**Background:** The purpose of this article is to describe the extent that student performance on in-class exams in a drug information course is associated with student performance on medication counseling in a high-stakes assessment using standardized patients (SP).

**Methods:** Students completed two traditional knowledge-based exams during a drug information and communication course. The objective structured clinical examination (OSCE) was the final exam for the course. The OSCE consisted of the student counseling an SP on the use of a medication. A counseling rubric was developed for use in a second-year (P2) OSCE based on the Indian Health Services counseling model and social cognitive theory. Multiple linear regression was used to examine if traditional exams and student admission characteristics were associated with student performance on the OSCE. Results: A total of 78 P2 students took the in-class exams and the OSCE. Students with higher scores on the second in-class traditional, knowledge-based exam had significantly higher scores on the OSCE.

**Conclusion:** A traditional knowledge-based exam on pharmacist-patient communication was associated with students' actual counseling performance on an OSCE. Faculty may be able to use exam scores to target students at high risk of doing poorly on a medication counseling OSCE.

**Background**

The Accreditation Council for Pharmacy Education (ACPE) has extended the responsibility of colleges and schools beyond provision of educational content and assessment of student knowledge in Standards 2016,<sup>1</sup> stating that student-pharmacists should be “practice-ready” and “team-ready” at graduation. ACPE<sup>1</sup> describes graduates who meet these terms as being “prepared to directly contribute to patient care working in collaboration with other healthcare providers.”

The ACPE practice readiness directive is a statement of the Council's expectations that colleges and schools will assure student achievement. This statement makes no mention of the courses taken or grades received, but rather puts the onus for proof of learning achievement upon the college or school. In the context of professional education, a reasonable argument is that practice readiness is similar and congruent to practice competence.

Professional competence has been defined as “the habitual and judicious use of communication, knowledge, technical skills, clinical reasoning, emotions, values, and reflection in daily practice for the benefit of the individual and community being served.”<sup>2</sup> Achievement of both practice readiness or competence requires more than simple knowledge acquisition. A practice ready student

\* Corresponding author.

E-mail addresses: [gillettec@marshall.edu](mailto:gillettec@marshall.edu) (C. Gillette), [rstanton@marshall.edu](mailto:rstanton@marshall.edu) (R.B. Stanton), [andersonh@marshall.edu](mailto:andersonh@marshall.edu) (H.G. Anderson).<http://dx.doi.org/10.1016/j.cptl.2016.11.004>

1877-1297/ © 2016 Published by Elsevier Inc.

must be prepared to demonstrate ability to apply knowledge gained to problem solving, to demonstrate an ability to practice in a variety of settings, perform necessary professional skills, and to ultimately perform integrated practice activities independently.<sup>3,4</sup>

Many pharmacy colleges and schools, having been charged with assuring achievement of student learning, may be challenged as they search for mechanisms to meet the Standards 2016 charge. Similar to practice competence, identifying student practice readiness will be a complex undertaking.<sup>2</sup> George Miller,<sup>3</sup> a renowned researcher in medical education and student assessment as well as the developer of Miller's Model of Clinical Competence, stated, "there is nothing more useless than a merely well informed man." This statement underscores the idea that tests of knowledge alone are grossly inadequate if our charge is to ensure practice readiness. At best, tests of knowledge can be interpreted as intermediate measures of the practice readiness or competence. Such tests are limited in their ability to provide useful information regarding student behaviors, problem solving, and practice skill acquisition.

Evaluation beyond traditional assessments are required to ensure achievement of learning objectives. Objective Structured Clinical Examinations (OSCE) is an assessment form that has the potential for generating information pertinent to identifying student achievement of practice readiness. However, these forms of assessment have their own challenges, and assurance of both the validity and reliability of these measures is paramount if decisions derived are to be defensible. It is because these assessments are used for decisions regarding student progression that each OSCE must be valid and reliable. Assurance of assessment validity and reliability allow faculty confidence in the decisions they make regarding student skill or learning outcome achievement, particularly in student progression.

Pharmacy students are required to complete a two credit-hour drug information and communication course in the second professional (P2) year. The fall 2013 semester was the first time the course was taught. The course covered topics including how to obtain and utilize drug information resources as well as counseling patients using the information obtained from those resources. Students were also taught advanced skills in patient counseling, such as Indian Health Services method of counseling and motivational interviewing.<sup>5,6</sup> The course was taught by two faculty members. The course was designed and delivered using the "flipped classroom" andragogy.<sup>7</sup> Students accessed a pre-recorded lecture before class and used time in class to answer questions and apply the concepts of the lecture using active learning. For example, students were given a case to design a decision aid (DA) that pharmacists could use to discuss the risks/benefits of angiotensin-converting-enzyme inhibitors, angiotensin-receptor-blockers, beta-blockers, and calcium-channel blockers. Students were asked to focus on the Bogardus risk communication framework<sup>8</sup> to help design the DA. Class sessions met once weekly for three hours in the school's studio classroom environment. The studio classroom has been found to facilitate collaborative learning by placing students in a round table so they can see each other.<sup>9</sup>

Marshall University School of Pharmacy (MUSoP) has implemented a multifaceted student assessment program that includes high-stakes assessments of students within each of the three professional years. This report summarizes the authors' efforts to establish convergent evidence that traditional exams actually measure the ability of a student to effectively counsel a patient for safe and effective medication use. Convergent evidence is verifying that two constructs that a researcher believes are related are actually related (or converge) to assure construct validity. We hypothesize that faculty may be able to use exam scores to identify and target more effort to students at risk of doing poorly on the OSCE. To our knowledge, this study is the first to describe how knowledge gained in the flipped classroom is applied to simulated patient care experiences in pharmacy curriculum.

## Methods

We conducted a retrospective analysis of traditional, knowledge-based exams and student scores on a pharmacist-patient counseling OSCE. The study design was cross-sectional. The study was approved by the Marshall University Institutional Review Board. We conducted the study on a required P2 course that teaches drug information and pharmacist-patient counseling.

The course had three learning objectives for pharmacist-patient communication. The three learning objectives that focused on pharmacist-patient communication were: (1) discuss different types of pharmacist-patient relationships, (2) evaluate and select appropriate communication theories to apply to different patient counseling scenarios, and (3) demonstrate effective counseling skills. The course focused on developing the future pharmacists' ability to deliver effective patient care by including the clinical and social/behavioral/administrative sciences suggested by Appendix B in the 2006 Accreditation Council for Pharmacy Education (ACPE) accreditation standards.<sup>10</sup> The ACPE standards' Appendix B gives guidance to pharmacy schools on essential topics to be covered that are essential to deliver effective patient care. ACPE recognizes that effective communication between pharmacists and patients is essential to providing optimal patient care in pharmaceutical settings.

### *Traditional exams*

The first exam covered behavioral theories that are relevant to pharmacist-patient communication, such as motivational interviewing and shared decision-making. There were five questions, worth ten points each, for this assessment. The second exam covered more behavioral theories relevant to pharmacist-patient communication, such as social cognitive theory, health belief model, and fuzzy trace theory. The exam also tested practical aspects of how to communicate about medications with patients. These aspects included identifying an open-ended question, how to elicit concerns about medications from patients, identifying why cultural competence is necessary, etc.<sup>11–13</sup> There were 15 questions, worth ten points each, for this assessment. Overall, each exam was worth 12.5% of the total final grade that students achieved in the course.

Download English Version:

<https://daneshyari.com/en/article/4938019>

Download Persian Version:

<https://daneshyari.com/article/4938019>

[Daneshyari.com](https://daneshyari.com)