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Research Paper

Examining differences between P1 versus P2 students as teaching assistants in a P1 skills-based course

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ABSTRACT

Introduction: The purpose of this study was to assess differences between the use of first-year (P1; "peer") versus second-year (P2; "near-peer") students as teaching assistants (TA) in a first-year, skills-based course.
Methods: The practicum course assesses competence in the provision of screening services and patient counseling. TAs review weekly material followed by a one-on-one assessment of each student using a grading rubric. Both qualitative and quantitative data were analyzed to determine if there was a difference in performance between the peer and near-peer teaching assistants.
Results: Sixteen peer and 33 near-peer TAs were evaluated by 210 students for six different skill assessments in practicum. There was no significant difference between peer and near-peer TAs in both student perception of TA performance and in TA grading of student performance.
Conclusions: There is no difference in the use of peer versus near-peer TAs in evaluating first-year pharmacy students in the skills-based course. Using peer TAs over near-peer TAs can be useful when faced with scheduling and other resource conflicts.

Introduction

Peer-led team learning (PLTL) is a teaching model that incorporates students who had previously excelled in a course to serve as near-peer tutors for incoming students.[1] Implementation of this teaching model in a chemistry workshop setting has shown peer-leaders to be a beneficial addition to educators, as well as crucial bridges between students and faculty.[1] This program benefits not only the students being tutored, but the faculty and the peer-leaders as well. Tutored groups perform similarly to groups not tutored, but experience better self-contentment after finishing the course.[2] The students tutored consider the peer-leaders to be valuable additions to the courses.[3] The peer-leaders can develop their teaching, organization, research, assessment, and appraisal skills. From an institutional perspective, they are also more cost-effective and more available than clinical staff.[4] In consideration of increasing resource constraints on institutions of higher education, faculty can incorporate existing human capital in the form of peer tutors without much additional cost or time.[5]

For faculty, working with the peer-leaders provides new and creative ways to teach the material to the students with the added benefit of increased student enthusiasm.[1] A successful peer-leader embodies three roles: information provider (lecturer, skills trainer), facilitator (mentor, moderator), and role model.[6] At Imperial College London, a long-term program focused on communication for first-year medical students is facilitated by medical teachers. However, faculty resources became strained; a proposal was implemented to have third-year students to lead the sessions. Their results found that the "patient-centered interviewing skills"

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exhibited no profound difference in students guided by their colleague versus the medical teacher.[7] Another program was created and led by eight medical students in their clinical years to assist junior students in preparation for a major written assessment. The program consisted of eleven two-hour sessions at the University of Leicester, UK, with the junior students organized into small groups. The results showed that 50% of students that attended one to four sessions were only neutral on the usefulness; however, over 80% of students who attended five to eight sessions scored the program as useful or very useful.[8] These results indicate that students who consistently attend peer-led sessions are more likely to find the sessions useful. Programs in nursing have also benefitted from using the PLTL model in courses such as health economics where students were able to further their understanding of the course material through group discussions.[9]

Application in graduate education

The PLTL teaching model has been implemented for medical students, and results have shown to improve perceptions of preparedness for examinations but do not seem to translate to actual exam performance.[10] The medical students who receive peer-tutoring were receptive and willing to learn from their peer-leaders.[8] As previously mentioned, nursing schools have also used the PLTL model for health economics classes and have concluded that this approach may be beneficial for other graduate courses. Although PLTL is used in other graduate programs, a review [11] conducted in 2006 of 20 articles regarding peer tutoring found that none of them focused on pharmacy students. PLTL is now being implemented more in pharmacy schools in both pharmacy practice courses and experiential education rotations. Rodis et al. [12] described an evaluation of the peer-mentoring program for a drug information pharmacy practice course at The Ohio State University College of Pharmacy. The evaluation concluded that the program improved both the P1 students being tutored and the P2 peer-leaders' abilities to compose drug information responses and improved the chances of the P1s of receiving a higher grade on the assignment. [12] In another article by Lindblad et al. [13] describing an experiential education rotation, two groups of students had staggered start dates for the same rotation. When the two groups overlapped, the group with more experience assisted their same-year peers in answering questions and providing feedback. Both the students and preceptors reported improvement in student confidence, responsibility, and judgment and cited the peer-assisted learning and preceptor knowledge for the improvement.[13]

Current endeavors

The Accreditation Council for Pharmacy Education (ACPE) guidelines discuss the importance of being an educator, a communicator, a leader and possessing self-awareness. ACPE specifically provides an example of leadership, which is to be able to develop relationships, value diverse opinions and understand individual strengths and weaknesses to promote teamwork. The ACPE guidelines also outline in detail the objectives for students as educators. These objectives state that students should be able to educate audiences through the most effective means and assess understanding while efficiently communicating with the group.[14] Peer tutoring in pharmacy education provides opportunities for both peer and near-peer tutors to embody these guidelines.

At the University of the Pacific, all students in their first year of pharmacy school are required to complete a pharmacy practice skills-based laboratory, Practicum 1, in their first semester. Students in their second year of pharmacy school (P2) who completed the course are eligible to become teaching assistants (TAs) for the Practicum 1 course for course credit. To decrease the student-to-TA ratio, students in their first year of pharmacy school (P1) who were concurrently taking the Practicum 1 course and interested in teaching were offered the opportunity to TA in the Practicum 1 course. In conducting the literature search, there were no articles that compared the teaching and assessment skills of peers to that of near-peers. The study objective is to assess differences between the use of P1 versus P2 as teaching assistants in a first-year skills-based course regarding student perceived effectiveness of their TAs as well as grading consistency and quality of feedback provided to students.

Methods

Course layout

Practicum 1 is a required core course that is offered in the first semester of a three-year accelerated PharmD program. Practicum 1 was designed to develop pharmacy practice skills and knowledge through completion of self-study modules, attendance to lectures, and application of knowledge with guided practice simulations. Course experiences relate to effective patient counseling for the most commonly prescribed and select non-prescription medications, pulmonary devices, smoking cessation products, and immunizations. Also, students learn the appropriate techniques for measurement of blood pressure, blood glucose and administration of immunizations for adults.

The teaching methodology consists of weekly sessions consisting of a one-hour lecture, as well as a two-hour breakout session that enables students to discuss pertinent information from the lecture and self-study modules and provides the opportunity to develop specific hands-on skills used in pharmacy practice. The course coordinator teaches the lecture and goes through the grading rubric that is to be used for their assessments during their breakout sessions. Grading rubrics are developed to be used as both a study guide for students as well as serve as an objective grading rubric for the TAs to use during assessments. Students were expected to complete self-study modules consisting of readings, videos, reviewing the grading rubric, and other activities before attending their breakout session.

During the two-hour breakout sessions, TAs, either peer or near-peer, lead their small group of five students. For the first portion