Development and implementation of peer-led weekly review sessions and the assessment of their impact on student learning

Alyssa L. Ashworth  
*St. John Fisher College, ala09413@students.sjfc.edu*

InLok Lam  
*St. John Fisher College, il05516@students.sjfc.edu*

Nicole E. Moore  
*St. John Fisher College, nem08860@students.sjfc.edu*

Melinda E. Lull  
*St. John Fisher College, mlull@sjfc.edu*

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Development and implementation of peer-led weekly review sessions and the assessment of their impact on student learning

Abstract
Peer tutoring services for a pathophysiology and therapeutics course have historically been made available to pharmacy students, but they were greatly underutilized. The role of peer tutors had been exclusively to hold office hours during which students could ask questions or review material. Peer tutoring services were updated and expanded based on the needs of the students. The objectives of this project were to develop, implement, and assess the impact of peer-led organized weekly review sessions in a pathophysiology and therapeutics course.

Disciplines
Pharmacy and Pharmaceutical Sciences

Comments
Poster presented at the American Society of Health Systems Pharmacy Midyear Clinical Meeting in Anaheim, California, December 2014.

This poster presentation is available at Fisher Digital Publications: https://fisherpub.sjfc.edu/doctoral_ext_pub/5
Objective
Peer tutoring services for a pathophysiology and therapeutics course have historically been made available to pharmacy students, but they were greatly underutilized. The role of peer tutors had been exclusively to hold office hours during which students could ask questions or review material. Peer tutoring services were updated and expanded based on the needs of the students. The objectives of this project were to develop, implement, and assess the impact of peer-led organized weekly review sessions in a pathophysiology and therapeutics course.

Methods
At the start of the semester, a survey was administered to second year pharmacy students. All surveys were developed using Qualtrics® survey software and the questions were designed to determine the current level of satisfaction with available tutoring services as well as what types of other resources they would utilize. Based on the results of the initial survey, weekly review sessions pertaining to current course material were developed. The peer tutors approached faculty members each week to determine key concepts to address. A PowerPoint presentation was then developed that included imbedded cases, reviews of key concepts, and cumulative questions leading up to each exam. These presentations were given at a once weekly meeting throughout the semester and lasted approximately 45 minutes. After one semester of implementing this new approach, the students were once again surveyed to assess their satisfaction with the weekly review sessions. Yes or no questions determined if students used the new tutoring services. The students that utilized these resources were then asked additional questions. The aim of these questions was to assess the students’ satisfaction and perceived usefulness of the services.

Results
A total of 63 out of 82 students responded to the pre-survey. Of these, 62% of respondents reported that holding short weekly review sessions of the course material would encourage them to utilize the tutoring services more often. Throughout the semester, a total of 11 review sessions were held, and on average, 70% of the class was in attendance. At the end of the semester, a post-survey was administered. A total of 71 out of 82 students completed this survey. The completed surveys, 91% attended at least one of the weekly review sessions. Of these students, 60% reported that they had attended every weekly review session that was offered. All students (100%) that attended at least one review session throughout the semester reported that they were satisfied with the review sessions. Furthermore, 95% and 93% of students felt that the review sessions increased their confidence going into an exam and that attending the weekly review session improved their performance on an exam, respectively. At the end of the semester, 99% of students reported that they would recommend continuing to offer the weekly review sessions in the future.

Weekly Review Session Semester Summary
- Number of Weekly Review Sessions: 11
- Average length of Weekly Review Session: 45 minutes
- Average % of class (n=82) in attendance: 70%
- % Attendance of at least one Weekly Review Session: 100%

Covered Topics During Weekly Review Sessions
- Hypertension
- Geriatrics
- Evidence Based Medicine
- Risk Assessment/Hyperlipidemia
- Ischemic Heart Disease
- Coronary Artery Disease (STEMI/NSTEMI)

Factors That Would Encourage Students to Utilize Tutoring Services More Often
(select all that apply; n=63; total responses=268)
- Practice Questions
- Formal Review to Pre-Exam
- Pre-made Flashcards
- Tutor-led small study group sessions
- More varied office hour times
- Electronic Office Hour times (via e-mail)

Question Average Score % SA/A
How satisfied were you with the weekly P&T review sessions conducted by the tutors? 4.91 100
I feel that attending the weekly review sessions improved my confidence going into the exam. 4.43 95
I feel that attending the weekly review sessions increased my performance on the exam. 4.43 94
I feel that the weekly review sessions accurately reflected the material that was on the exams. 4.48 97
I feel that the weekly review sessions are a valuable resource. 4.81 98
The weekly review sessions influenced the way that I studied for the exams. 4.40 89
I recommend continuing to offer weekly review sessions in the future. 4.84 98
Attending the weekly review sessions will increase my likelihood of utilizing the tutoring services in the future. 4.13 79

Conclusions
- The use of weekly review sessions was successful.
- Substantial increases in utilization of the tutoring services were seen and were deemed beneficial to learning according to student opinion.
- It was recommended that this method of providing tutoring services be continued.
- Future studies may look at how these services directly correlate to the grades obtained on formal examinations.

Disclosures
Authors of this presentation have personal or financial interest in the subject matter of this presentation.

Alyssa L. Ashworth: Nothing to disclose
Nicolene E. Moore: Nothing to disclose
InLok Lam: Nothing to disclose
Melinda E. Lull: Nothing to disclose

References

Student Perceptions of Weekly Review Sessions (n=71)

<table>
<thead>
<tr>
<th>Question</th>
<th>Average Score</th>
<th>% SA/A</th>
</tr>
</thead>
<tbody>
<tr>
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<td>4.13</td>
<td>79</td>
</tr>
</tbody>
</table>

Response.

* Based on a Likert Scale of 1-5 (1= Strongly Disagree; 5= Strongly Agree); SA= Strongly Agree; A= Agree

Weekly Review of class material (1-2 topics)

<table>
<thead>
<tr>
<th>Question Average Score</th>
<th>% SA/A</th>
</tr>
</thead>
<tbody>
<tr>
<td>Practice Questions</td>
<td>4.38</td>
</tr>
<tr>
<td>Formal review to each exam (1-60 min)</td>
<td>4.84</td>
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<tr>
<td>Pre-made Flashcards</td>
<td>4.43</td>
</tr>
<tr>
<td>Tutor-led small study group sessions (5-6 students)</td>
<td>4.43</td>
</tr>
<tr>
<td>More varied office hour times</td>
<td>4.13</td>
</tr>
<tr>
<td>Electronic Office Hour times (via e-mail)</td>
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</tbody>
</table>

Score*