Peer assisted learning in pharmacy: The mentor and student perspective

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Abstract

Introduction: Peer assisted learning (PAL) was introduced into a 2nd year pharmacy cohort (n=160) using older students as mentors. Participation in PAL was voluntary.

Aim: This study aims to evaluate the Pharmacy Law PAL sessions, from both the students' and mentors' perspective.

Methodology: Evaluation surveys were designed to understand participation and experiences for both students and mentors. Surveys were distributed and collected at the end of a lecture and analysed using Survey Monkey® and word clouds.

Results: Encouragingly 91.1% (n=82/90) of the responders had attended a PAL session, with the average attendance being four sessions. Positives of being taught by peers include opportunities to learn from their experiences, and ask questions from peers who have already completed the module. Mentors also benefitted from participating in the scheme.

Conclusion: Results show that students appreciate these additional support mechanisms, and the majority of students have engaged with these.

Keywords: *Peer Learning, Mentoring, Education, Student, Mentor*

Introduction

To become a pharmacist in the United Kingdom (U.K), individuals must complete a four-year undergraduate course followed by a one-year pre-registration placement. Throughout the pre-registration placement, students are expected to successfully complete competency based assessments and pass a written exam at the end of the year, prior to registering with the General Pharmaceutical Council (GPhC).

Once registered, a pharmacist can work in a variety of sectors including working for the National Health Service, in the pharmaceutical industry, in retail, or in academia. Pharmacists are responsible for ensuring that all medicines are legally and safely supplied, in addition to providing medication and lifestyle advice to patients. (GPhC, 2017). To ensure professional standards are upheld, pharmacy practice is regulated by multiple laws. Consequently, learning pharmacy law can seem like a daunting task for undergraduate pharmacy students; however, it is essential that they understand and know how to apply pharmacy law to everyday practice to ensure optimal health outcomes for their patients.

Over the past few years, several active learning strategies have been introduced into the Pharmacy Law module at Kingston University, including peer-assisted learning sessions (PAL), the use of clicker technology and the social media platform, Snapchat. The interventions were introduced to encourage student learning and engagement in relation to pharmacy law, as feedback from module evaluations showed that students found teaching to be fact heavy and often too didactic. PAL was initially introduced in 2014 to pharmacy in an attempt to reduce the number who were underachieving at the end of year assessment, as the pass mark for this module is higher than in others due to GPhC requirements. Clickers have been used since 2015 and Snapchat was introduced in 2016 (Micallef & Slater, 2017). These interventions were all to supplement and support teaching already given in a safe environment. Based upon the current literature, it is suggested that active learning can increase student participation, student experience and improve their overall performance (Freeman *et al*., 2014); therefore, this paper will evaluate the PAL sessions initiated within the Pharmacy Law module from both mentor and mentee perspectives.

Peer-assisted learning has been used widely to support student learning in a variety of health subjects. The current literature suggests that PAL sessions can increase

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a student's engagement in a topic (Carbone *et al.*, 2015), whilst enabling the students to become better learners (Longfellow *et al.*, 2008). In addition, students who attend PAL sessions are likely to benefit from sharing experiences and teaching their peers (Hilll, Liuzzi & Giles, 2010). To date, there has been one study which has examined PAL from the perspective of medical students, their tutors and co-ordinators (Hilll, Liuzzi & Giles, 2010), whilst another study evaluated PAL sessions, based on feedback from medical students (Nestel & Kidd, 2005). To the authors' knowledge, there is currently no detailed review of PAL sessions available from a pharmacy student or pharmacy student mentor's perspective. Therefore, this study aims to address the current gap in the literature.

The concept of PAL was introduced to a 2nd year pharmacy student cohort (n=160) during a Pharmacy Law and Ethics lecture, with the Module Leader, in September 2016 to support teaching in the academic year 2016-2017. The Module Leader explained that eight 3rd year pharmacy students and five 4th year pharmacy students had volunteered to become mentors in Pharmacy Law and that they had undertaken training, provided by the University, to enhance their skills of facilitation and lesson planning. All mentors were reimbursed for their contribution.

During the introduction to PAL, the 2nd year pharmacy students were informed that each PAL session was timetabled to last for one hour; however, the students were under no obligation to participate in the sessions as all essential information for the summative sessions would be covered during timetabled sessions with academics. PAL provided the opportunity to consolidate learning and share experience with those who had already been through the process, enhancing communication and other soft skills for both mentor and mentee. No additional teaching hours were added for staff, as revision sessions were planned to ensure staff also support the consolidation of material. Ideally, each PAL session would have been run once, with five-six mentors; however, due to the size of the year group and other timetabling constraints, the year group was divided in two, with 80 students allocated to each group.

All PAL sessions were designed and run by the mentors. The Module Leader allocated three to four mentors to run each PAL sessions and a variety of topics were covered, including calculations, controlled drugs, record keeping and veterinary medicines. To ensure consistency, the same mentors ran both sessions on each topic. In addition, the sessions included mock assessments and examples of exam questions, to aid revision. The topics covered during PAL sessions were selected by the Module Leader based upon feedback and demand from the 2nd year pharmacy students through verbal feedback and formal mid-module feedback. Overall, six PAL sessions took place throughout the academic year. Although all material for the session was written by the mentors, the Module Leader approved material delivered to ensure it was appropriate. The mentors running the session on a specific topic all contributed to the creation of the material for that particular session. The lessons were run with a scenario on the screen for mentees to complete, and then feedback was given by the mentors. The sessions were not tailored to meet individual needs, however, one-to-one sessions were arranged in rare cases where a specific need was identified and the material had already been covered and reinforced by module staff.

This study aimed to evaluate the Pharmacy Law PAL sessions, from both the student and mentor's perspectives.

Method

An evaluation survey, consisting of eight questions was given to the 2nd year pharmacy students. The survey was designed to determine student perceptions of PAL, through tick box questions, Likert scale questions and comment boxes for qualitative responses. In addition, the mentors received a shorter evaluation survey consisting of three questions.

The paper-based evaluation survey for the 2nd year pharmacy students was distributed during a Pharmacy Law lecture in March 2017. At the start of the lecture, the purpose of the survey was explained to the students. They were also informed that all information provided would remain anonymous and only the Module Leader would have access to the raw data. All students attending the lecture were eligible to complete the survey; however, participation was voluntary and the students could withdraw from the survey at any point. The students gave implied consent by completing the evaluation survey. All surveys were collected immediately upon completion and all data was analysed. Not all responders answered all questions.

The mentors received their evaluation survey *via* an email from the Module Leader. They were asked about several topics, including personal gains, the positive aspects of PAL and the associated challenges. In the initial email, the mentors were informed that their participation in the survey was voluntary and anonymity was ensured, by the Module Leader.

The raw data from both evaluation surveys was input into a software survey tool, Survey Monkey, prior to data analysis. Descriptive statistics including percentages, mean values and modes were used to quantify the data gathered from the closed questions. Microsoft Excel was used for data analysis. Open questions were analysed using content analysis. In addition, the mentor responses were analysed using thematic analysis and quotes from responses were gathered to elucidate findings.

PAL data were also collected from the Module Evaluation Questionnaire.

As this was a service development evaluation, ethical approval was not required.

Results

Student responses

Over half (56.2%, n=90/160) of the 2nd year pharmacy students completed the PAL evaluation survey. Of the students surveyed, 91.1% (n=82/90) had taken the opportunity to participate in a Pharmacy Law PAL session, with 16 (19.5%) of the students attending all six PAL sessions and only four (4.9%) students attending just one PAL session. Overall, the mean attendance was four sessions.

The students were asked to provide feedback about the PAL sessions and their mentors, using a 10-point Likert scale, where 1 was very poor and 10 was excellent. The mentors received modal scores of 8 and 10 (Figure 1), the content and ability to ask questions were given modal scores of 8, whilst learning achieved modal scores of 7 and 8 (Figure 2). All modal scores are presented in Table I.

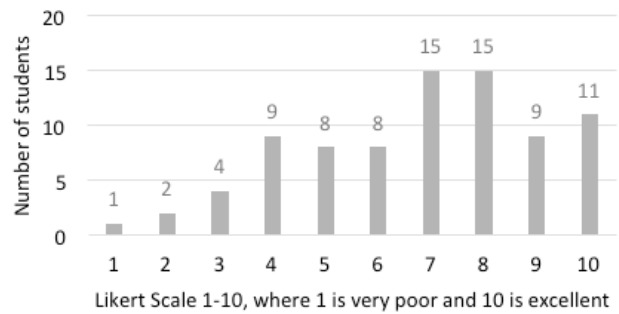**Table I: Likert scale responses about PAL sessions**

Score	PAL mentors	Content	Learning achieved	Ability to ask questions
1	3	1	1	1
2	1	2	2	6
3	3	2	4	3
4	11	6	9	9
5	10	5	8	9
6	10	13	8	5
7	9	15	15	11
8	12	16	15	14
9	11	12	9	12
10	12	10	11	12

1= Very Poor to 10 = Excellent

Figure 1: Ratings of PAL leaders from session(s) attended

Likert Scale 1-10, where 1 is very poor and 10 is excellent
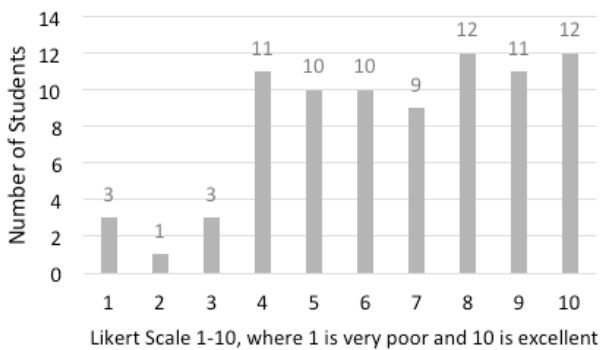
Figure 2: Ratings of learning achieved from session(s) attended

Likert Scale 1-10, where 1 is very poor and 10 is excellent

When the students were asked the following free-text response question: "What are the positives of being taught by your peers?", several students commented that they liked "*the opportunity to ask questions*", whilst other students commented that they "*enjoyed learning from their mentor's experiences*". Several other students suggested that the mentors were "*relatable*" and "*understood their current position*". The students were asked further questions about their PAL experience and how the sessions could be improved for future cohorts. Many students commented on the PAL sessions had been "*useful for exam and Observed Structured Clinical Examination (OSCE) preparation*". Most of the feedback about the PAL sessions was positive; however, several students commented on the large number of students attending each PAL session and that on occasions the sessions were "*variable, depending upon the mentors' present*". Using the survey's comment boxes, the students made suggestions about how PAL could be improved for future cohorts. Some suggestions included "*smaller group work during the sessions*" and "*knowing the topic in advance of the session*". One student elaborated on the latter suggestion by stating that they "*could decide whether to attend or not, if they knew the topic in advance*". Based upon the positive feedback received from the students, there have been requests to incorporate PAL in other pharmacy modules.

Mentor responses

A total of eight mentors completed the evaluation survey, which had been sent *via* email; therefore, a response rate of 61.5% (n=8/13) was achieved. Four responses came from 3rd year students with the remaining responses coming from the fourth year mentors. When the mentors were asked: "What have you personally gained from being a PAL leader?", the skills and knowledge gained were the most common themes. The skills described included leadership, confidence and communication skills. The mentors also commented on the "*opportunity for personal development*", in addition to refreshing and updating their knowledge about Pharmacy Law.

"Personally, what I have gained is leadership and communication skills. Speaking to a large audience was not something I was used to, particularly when most of the presentations we do are in small groups over the course. So, it helped me to build confidence. Furthermore, helping someone is a very rewarding aspect of the role." [Responder 7, 4th year student]

"I have gained more confidence and met many new people. I have also been able to keep my knowledge up to date. PAL sessions have refreshed my memory on things I may have forgotten." [Responder 4, 4th year student]

The second question in the mentor evaluation survey was: "What have you enjoyed?". Based upon the responses received, the mentors had enjoyed the sessions with teamwork and skills being key themes. They also commented that they had enjoyed working with and learning from other year groups, in addition to creating Pharmacy Law material and delivering it. Thus, the latter provided an opportunity for mentors to improve their presentation skills.

"I have also enjoyed working with colleagues and meeting different people from the year below, who I did not know before." [Responder 7, 4th year student]

"This year as a PAL leader, I have really enjoyed getting to know the second-year students and having informal situations where we could challenge each other's knowledge. I really enjoy having interactive sessions where it is a big group effort. It was a great experience which I have found to be really enjoyable and would recommend everyone to participate and introduce them to rollover into multiple years." [Responder 5, 3rd year student]

"In summary, my decision to apply to be a PAL leader has been one of the best decisions I have made in terms of taking a positive step towards my future goals and career aspirations." [Responder 8, 3rd year student]

For the final question, the mentors were asked: "What were the biggest challenges of PAL?". Key themes included time management and people management. The sessions being too short was cited as a challenge, along with not knowing how much material to prepare for a session. Other challenges included working with large numbers of 2nd year pharmacy students, different learning styles, and difficulties defining roles among mentors. However, the mentors recognised that each challenge enabled them to develop skills and provided them with an opportunity to learn how to become a future leader in the pharmacy profession.

"Every student has different ways of learning. My biggest challenge was handling a massive cohort of students in such a short period of time, with 3 other PAL mentors alongside. Sometimes, learning with a smaller group may help. The traditional slides method may potentially work with a large cohort, but not with other approaches. Another challenge was the difference in the level of eagerness from the students to learn and engage during the sessions. Some students attend just to obtain learning material." [Responder 6, 4th year student]

"Becoming a PAL mentor may be a challenge, but as future pharmacists we want to always challenge ourselves to reach our potential. We do this for the benefit of our patients and the public. In this case, we challenge ourselves for the benefit of our pharmacy students." [Responder 6, 4th year student]

When looking at the Module Evaluation Questionnaire 84.7% (n=72/85) of students agreed or strongly agreed that the learning material for the module supported learning, and 79.1% (n=68/86) felt that there were opportunities to participate in the module. In comparison, the overall scores for the module exceeded those of the Department and the Faculty. When asked, 18% (n=13/71) of the qualitative comments explicitly stated that PAL was the best thing about this module.

Discussion

The results from the student evaluation survey show that most students had attended and engaged with the PAL sessions. The feedback about the mentors and session structure was predominantly positive. The students reported an increase in their Pharmacy Law knowledge, in addition to developing skills and enhancing their overall experience of the module. Due to the voluntary nature of this intervention, a small proportion of the cohort did not attend a PAL session; however, those who did participate perceived benefits to their learning. Exam results cannot be extrapolated to determine the benefit of PAL due to the confounding nature of the other active learning interventions; however the first attempt exam pass rate was 86% which exceeds the pass rate for previous years.

The mentor evaluation survey acknowledged some of the challenges faced by the mentors; however, the challenges were outweighed by the positive and rewarding experience of being a PAL mentor. The provision of feedback from students and mentor has identified areas which can be improved, before PAL is initiated in other pharmacy topics, among other year groups. The PAL sessions could be improved by recruiting more mentors and therefore, reducing the size of each group. Also, for the students who would like to know which topic is being taught in advance or what information will be covered, formalised objectives could be introduced. The benefits of using SMART objectives in PAL sessions has been evaluated previously (Ross *et al.*, 2016).

This paper aimed to address the current gap in the literature by evaluating pharmacy students and pharmacy student mentors' perceptions of Pharmacy Law PAL sessions. Based upon these findings and the existing literature, the use of PAL in other pharmacy modules, including pharmacy placements will be explored (Leong, Battistella & Austin, 2012).

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