



RESEARCH ARTICLE

Motivational methods for first year pharmacy students in professional practice skills laboratory

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Abstract

Objective: To determine the effects of adding motivational quotes, videos, and poems into the first-year skills lab course at the University of Florida, College of Pharmacy. **Methods:** A cross-sectional study assessed first-year pharmacy students' enrolled in practice skills laboratory I and II courses responses to a questionnaire regarding a motivational method employed in those courses. **Results:** The majority of students (68% to 88%, n=231) survey responses, focusing on the model's overall impact, answered, "moderately agree" or "agree" or "strongly agree". When reviewing which motivational modality was most helpful, approximately 39% identified videos as the most valuable. Additionally, gender was found to be significantly different for certain questions in the survey. **Conclusion:** The study demonstrated that students found value in motivational activities prior to the beginning of each class. Students identifying as female found greater value in specific questions, including questions regarding personal values and ethics, and a positive difference in their personal life.

Introduction

Due to the evolving field of pharmacy, pharmacy curriculums have sought to understand how to recognise, define, and create learning environments that highlight student motivation and engagement. Motivation can be defined as the energising of behaviour in pursuit of a goal; motivation can be further delineated into two categories: intrinsic and extrinsic (Simpson & Balsam, 2016). Intrinsic motivation refers to doing something because it is inherently interesting or enjoyable, whereas extrinsic motivation refers to doing something because it leads to a separable outcome (Ryan & Deci, 2000). Related to motivation, engagement incorporates a connection and attachment to a particular setting or task and can be defined as the individual's psychological investment in learning and mastering knowledge or skills (Oyler *et al.*, 2016). Although difficult to concretely define at times, several models have been designed to measure motivation, along with engagement, within academic settings (Chang, 2009; Jones, 2020). Specifically, the

Music Model has been shown to aid instructors in selecting strategies that can increase student motivation and engagement in health professions (CAPE, 2013; Jones *et al.*, 2019). Both the 2013 Center for the Advancement of Pharmacy Education (CAPE) Educational Outcomes and the 2016 Accreditation Council for Pharmacy Education (ACPE) Standards for the Doctor of Pharmacy (Pharm. D.) degree include and emphasise these concepts in their respective competencies (CAPE, 2013; ACPE, 2021). Moreover, it has been suggested that first year Pharm. D. students' motivation shifts from a mastery orientation, defined as a "desire to develop competence", to academic alienation, defined as "no desire to develop or demonstrate competence" (Hastings *et al.*, 2005; Cheang, 2009). As disparities can be identified and exist in regard to pharmacy student motivation and engagement, several strategies have been used to strengthen these concepts within curriculum models, such as active learning, team-based learning, and "flipped" classrooms (McLaughlin *et al.*, 2013; Freeman *et al.*, 2014). For first year pharmacy students in the

skills lab course, the authors considered the idea of using motivation as a vehicle for creating engagement.

The University of Florida, College of Pharmacy has historically followed a “2+2” curriculum model, where years one and two are basic sciences in a large lecture format, and years three and four are most focused on the practice of pharmacy. Given the college’s transformational leadership and recognition that pharmacy practice is constantly changing, a 2014 curriculum Task Force was created to evaluate the current curriculum and develop a new, innovative approach to the existing model. The purpose of the Task Force was, “to recognise that students now entering the pharmacy curriculum will be practicing into the 2060s and need to be equipped with the knowledge and skills that will be required to navigate the changes in health care over that time frame” (UF Health, 2014). The Task Force identified key, desirable attributes of pharmacy graduates, limitations of the current model, and what the new, 2015 model would look like. The model has since been implemented and includes some of the strategies mentioned above, such as active learning and “flipped” classrooms. Additionally, the current model focuses on personal and professional development of students, capstone assessments, and context-based curricular integration. As the programme has undergone this major change since 2015, it is vital smaller changes with similar goals and impact are created throughout the curriculum. Motivational Mondays is one of those innovations with that potential ability to drive the college’s transformation even further. The authors were able to collect qualitative and quantitative data regarding how a student is affected by a novel motivational activity from the students themselves. This is invaluable information that can be used to measure students’ engagement and motivation throughout the curriculum.

Methods

In an effort to overcome some of these issues, the authors wanted to determine if adding motivational quotes, videos, and poems into the first-year pharmacy curriculum would improve students’ engagement and motivation to learn material presented in the curriculum. Through a new practice that was referred to as “Motivational Mondays”, faculty would introduce a motivational topic for a five to ten-minute period at the beginning of the lab. Each Motivational Monday topic has three specific components: a chosen topic, a content delivery method, and a personal story. The motivational topic could range from philosophical

discussion, ideas about “living to the fullest”, to more self-affirmative concepts like “being the best version of yourself,” to mindfulness practices such as mantras, meditation, and awareness. During this first implementation of Motivational Monday, the topics were randomly chosen. To facilitate the delivery of these topics, motivational quotes, poems, pictures, and videos that related to the topic was used. After presenting the topic, the faculty would share a personal story that connected the motivational topic to their pharmacy practice. This would also lead to a discussion where students could share their thoughts, opinions, or their own personal stories. For example, a topic would be presented about changing people’s lives through meaningful interactions, and a video, poem, or another medium would then be shown that highlighted this concept. Afterwards, the faculty member would then share a story about a patient that they helped in their practice and relate how meaningful interactions allowed them to make this intervention. This process was repeated every Monday at the beginning of each skills lab for an entire year.

Study design and participants

A questionnaire was administered upon completion of the first year professional skills lab course to evaluate the effectiveness of the innovation and its perceived impact on student engagement. Data and results were collected in the summer semester after students completed their first year of the pharmacy curriculum. Appendix A details the full questionnaire and the specific questions asked to first year students. Internal resources and contacts within the college, such as Regulatory and Compliance Support was used, to ensure the questions asked were sound and designed appropriately. This questionnaire was distributed electronically through Qualtrics among all three University of Florida, College of Pharmacy campuses: Gainesville, Jacksonville, and Orlando. The questionnaire consisted of 28 questions, including both multiple choice and an open-ended question format. In addition, it was estimated to take five minutes to complete. The questionnaire was anonymous and was not required to be completed by students. As this was the first time this model was used, the responses received were entirely voluntary. A majority of questions incorporated a five point Likert scale to gauge student motivation and engagement with this model. For instance, answer choices on a specific question ranged from “disagree” to “strongly agree”. Several additional questions were included to obtain student demographic information, such as gender, age, campus location, and skills lab session.

Results

Two-hundred and thirty-three first year pharmacy students agreed to participate in the entire questionnaire while three students decided to opt out and not participate. In terms of demographics, approximately 58% of respondents identified as female, 41% as male, and 1% as other. Each campus was represented in the results as 55%, 18%, and 27% of respondents were from the Gainesville, Jacksonville, and Orlando campus, respectively. Each of the lab sessions that were conducted throughout the day were similarly represented: four sessions for Gainesville, three sessions for Orlando, and two sessions for Jacksonville. For 117 of the 233 students, this was their first exposure to a motivational-type model in a classroom setting.

Respondents answered “moderately agree” or “agree” or “strongly agree” ranged from 68% to 88% for questions that focused on the model’s overall impact. When reviewing which motivational modality was most helpful, approximately 39% identified videos as the most valuable. This was followed closely by personal stories from faculty at 33%. Twenty percent responded with quotes as the most helpful and 8% with poems. It was noted that the results identified a disconnect between the model and students’ perception of their preparedness for the community introductory

pharmacy practice experience during the summer after their first year. Twenty-two percent of students “disagreed” that Motivational Mondays helped in this regard.

In terms of students’ open-ended responses, an overwhelming amount of comments were positive and highlighted the positive efforts that the model had at engaging students and mitigating any stressful thoughts prior to entering the lab on Monday. For instance, one comment read, “Motivational Mondays were very inspiring; made me pause to take a second look”, and another read, “[Motivational Mondays] gave me the encouragement to continue to work hard.” These responses are forms of direct feedback, both positive and negative, that can aid in the future development of the model. It is also important to note these qualitative results are currently preliminary and require further review. However, based on these preliminary results, it can be concluded that Motivational Mondays can help in improving first year pharmacy student motivation and engagement during classroom activities.

In regards to gender differences, it was found that four questions were answered differently between persons identifying as female versus those identifying as male: questions 8, 20, 21 and 23 (Table I). No differences were seen between lab times, age, or campus.

Table I: Questions showing statistical significance for gender ($p \leq 0.05$)

Question #	Questions	p-value
Q3	After participating in Motivational Monday Activities, I am more likely to work harder in classroom settings.	0.3662
Q4	Motivational Monday Activities helped increase my participation with the coursework in skills lab each week.	0.2379
Q5	Motivational Monday Activities helped increase my participation with the coursework in skills lab each week.	0.2574
Q6	Motivational Monday Activities changed the way I understand an issue or a concept.	0.0923
Q7	Motivational Monday Activities helped me better understand someone else’s viewpoint.	0.223
Q8	Motivational Monday Activities made a positive difference in my personal life.	0.0103^I
Q9	Motivational Monday Activities were completed at the UF College of Pharmacy Skills Lab.	0.6583
Q10	Motivational Monday Activities made a positive difference in my professional life.	0.0545
Q11	Motivational Monday Activities increased my understanding of the importance of communicating more openly with patients.	0.0807
Q12	Motivational Monday Activities increased my comfort level in performing lab assessments each week.	0.1873
Q13	Motivational Monday Activities increased my desire to want to learn.	0.1372
Q14	Motivational Monday Activities increased my awareness of other’s needs.	0.0768
Q15	Motivational Monday Activities increased my gratefulness for my education.	0.0701
Q16	Motivational Monday Activities increased my empathy towards others.	0.2201
Q17	To what extent have Motivational Monday Activities contributed to working effectively with others?	0.2136
Q18	To what extent have Motivational Monday Activities contributed to understanding myself?	0.0792
Q19	To what extent have Motivational Monday Activities contributed to understanding individuals of diverse backgrounds?	0.1822
Q20	After Motivational Monday Activities, to what extent did you find yourself reflecting upon your personal code of values / ethics.	0.0041^I
Q21	After Motivational Monday Activities, to what extent did you find yourself thinking of the welfare of others.	0.0177^I
Q23	The time spent I spent participating in Monday Motivational Activities was a good use of class time for me.	0.0035^I
Q24	After Motivational Monday Activities, I feel / felt more prepared for my CIPPE rotation.	0.6505

^I - Denotes statistically significant differences; CIPPE: Community Introductory Pharmacy Practice Experience

Discussion

Upon full review of this survey, the Motivational Monday model has demonstrated a positive impact on pharmacy student engagement in an academic learning environment. As this is the first time, the authors have implemented an initiative such as this one and anticipated continuing to incorporate Motivational Mondays within the first-year skills lab course. The plan is to grow the innovation in two facets: content and delivery. Since students rated personal stories and videos as the most impactful pieces of Motivational Mondays, it highlights a significant area of opportunity. Faculty anecdotes and videos should be the central focus. This implies that the faculty member should put more effort into finding great patient stories and videos to facilitate meaningful discussion.

The differences between gender, in regards to answers to the survey questions, was unexpected and required further thought. The specific questions showing a difference in gender seem to indicate that students who identify as female felt that Motivational Mondays had a more personal effect on their lives, whereas, students who identify as male may be motivated by other factors not measured by the survey.

In reflecting on the relationship between the current pharmacy curriculum model and Motivational Mondays, the authors see one that is symbiotic in achieving their ultimate goals. The authors' goals as a college are to create lifelong learners and successful pharmacists who pursue greatness in all avenues of healthcare. Motivation and engagement are crucial towards achieving these; Motivational Mondays is one method to make these goals a reality for this current student body and future pharmacists. As the new curricular model focuses on "soft skills", such as self-awareness, interpersonal communication, and leadership, Motivational Mondays can reinforce this sometimes overlooked, however, necessary skill set. It is with this direct relationship and fit that the authors see Motivational Mondays being further incorporated throughout not only the skills lab, but as a differentiating factor in the curriculum as a whole.

Student feedback was also a helpful identifier as areas of improvement for the model. Several comments agreed that the content should be available after the lab for students to revisit. In addition, student responses were congruent in stating that they hoped the content correlated to the lab material presented in that session. This brings us to another improvement, which is the intentional selection of a motivating topic. As stated previously, topics were chosen and presented at random. Moving forward, it may prove beneficial to select topics that specifically relate to the skills lab

concept being presented. In addition, the topic can be revisited during the last five minutes of class as an effective way to provide continuity to the what, why, and how the topic related to the work completed during class. Moreover, the current curriculum could consider pursuing similar models during the later skills lab courses as students matriculate throughout the programme. This could reinforce familiarity and generate staying power to ensure students remain present, engaged, and motivated.

Furthermore, the survey could be revisited and edited to congruently match any future changes that are made. For instance, a few open-ended questions at the end of the survey can highlight where specific changes can be made to the already existing model. With this in mind, the authors are hopeful to increase their high response rate from the questionnaire. A similar analysis could then be conducted to track the impact of Motivational Mondays. Lastly, documenting changes from year-to-year and highlighting both areas of success as well as improvement with the initiative will be crucial for continued quality improvement. As student engagement and motivation can be difficult to explicitly define, it is also vital to revisit and appropriately make changes to reflect what these terms mean and look like within a pharmacy programme. While it has been documented that pharmacy student engagement and motivation can be a potential issue as students transition into their first year, Motivational Mondays can be an effective model that strives to mitigate learning disparities and reinforce student engagement.

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Appendix A: Motivational Monday Activities Survey

1. Do you agree to participate?
 - a. Yes
 - b. No
2. Have you ever been in a class, prior to Skills Lab, where Motivational Poems, Quotes, and/or Videos (Motivational Monday Activities) were incorporated into the course?
 - a. Yes
 - b. No
3. After participating in Motivational Monday Activities, I am more likely to work harder in classroom settings.
 - a. Disagree
 - b. Slightly Agree
 - c. Moderately Agree
 - d. Agree
 - e. Strongly Agree
4. Motivational Monday Activities has helped increase my participation with the coursework in skills lab each week.
 - a. Disagree
 - b. Slightly Agree
 - c. Moderately Agree
 - d. Agree
 - e. Strongly Agree
5. Motivational Monday Activities has helped increase my participation with the coursework in skills lab each week.
 - a. Disagree
 - b. Slightly Agree
 - c. Moderately Agree
 - d. Agree
 - e. Strongly Agree
6. Motivational Monday Activities changed the way I understand an issue or a concept.
 - a. Disagree
 - b. Slightly Agree
 - c. Moderately Agree
 - d. Agree
 - e. Strongly Agree
7. Motivational Monday Activities helped me better understand someone else's viewpoint.
 - a. Disagree
 - b. Slightly Agree
 - c. Moderately Agree
 - d. Agree
 - e. Strongly Agree
8. Motivational Monday Activities made a positive difference in my personal life.
 - a. Disagree
 - b. Slightly Agree
 - c. Moderately Agree
 - d. Agree
 - e. Strongly Agree

9. Motivational Monday Activities were completed at UF COP Skills Lab.
- Yes
 - No
10. Motivation Monday Activities made a positive difference in my professional life.
- Disagree
 - Slightly Agree
 - Moderately Agree
 - Agree
 - Strongly Agree
11. Motivational Monday Activities increased my understanding of the importance of communicating more openly with patients.
- Disagree
 - Slightly Agree
 - Moderately Agree
 - Agree
 - Strongly Agree
12. Motivational Monday Activities increased my comfort level in performing lab assessments each week.
- Strongly agree
 - Disagree
 - Slightly Agree
 - Moderately Agree
 - Agree
 - Strongly Agree
13. Motivational Monday Activities increased my desire to want to learn.
- Disagree
 - Slightly Agree
 - Moderately Agree
 - Agree
 - Strongly Agree
14. Motivational Monday Activities increased my awareness of others' needs.
- Disagree
 - Slightly Agree
 - Moderately Agree
 - Agree
 - Strongly Agree
15. Motivational Monday Activities increased my gratefulness for my education.
- Disagree
 - Slightly Agree
 - Moderately Agree
- Agree
 - Strongly Agree
16. Motivational Monday Activities increased my empathy towards others.
- Disagree
 - Slightly Agree
 - Moderately Agree
 - Agree
 - Strongly Agree
17. To what extent have Motivational Monday Activities contributed to working effectively with others?
- No extent
 - Little extent
 - Some extent
 - Moderate extent
 - Great extent
18. To what extent have Motivational Monday Activities contributed to understanding myself?
- No extent
 - Little extent
 - Some extent
 - Moderate extent
 - Great extent
19. To what extent have Motivational Monday Activities contributed to understanding individuals of diverse backgrounds?
- No extent
 - Little extent
 - Some extent
 - Moderate extent
 - Great extent
20. After Motivational Monday Activities, to what extent did you find yourself reflecting upon my personal code of values and ethics.
- No extent
 - Little extent
 - Some extent
 - Moderate extent
 - Great extent
21. After Motivational Monday Activities, to what extent did you find yourself thinking of the welfare of others.
- No extent
 - Little extent
 - Some extent
 - Moderate extent
 - Great extent

22. Which type of Motivational Monday Activity was most helpful to you to focus on each week's lab session material? (select all that apply)
- Poems
 - Quotes
 - Videos
 - Personal stories from faculty
23. The time I spent participating in Monday Motivational Activities was a good use of class time for me.
- Disagree
 - Slightly Agree
 - Moderately Agree
 - Agree
 - Strongly Agree
24. After Motivational Monday Activities, I feel / felt more prepared for my CIPPE rotation.
- Disagree
 - Slightly Agree
 - Moderately Agree
 - Agree
 - Strongly Agree
25. What gender do you identify as?
- Male
 - Female
 - Trans-male
 - Trans-female
 - Cis-gender
 - I prefer not to answer this question
26. What is your age?
- 20 - 25
 - 26 - 30
 - 31 - 35
 - 36 - 40
 - 40+
 - I prefer not to answer this question
27. What was your lab session?
- Session 1 (8:30am)
 - Session 2 (10:40am)
 - Session 3 (1:55pm)
 - Session 4 (4:05pm)
28. Which campus do you attend?
- Gainesville
 - Jacksonville
 - Orlando
29. Please use the text box below to provide any additional thoughts or comments regarding the Motivational Monday Activities: