BRIEF

Enhancing the Emotional Intelligence of Student Leaders Within an Accelerated Pharmacy Program

Kelsey Buckley, PharmD, Bill Bowman, PhD, Erin Raney, PharmD, Titilola Afolabi, PharmD, Rebekah M. Fettkether, PharmD, MPH, Suzanne Larson, PharmD, Shawn Tennant, PharmD, MBA, Kellie J. Goodlet, PharmD

Midwestern University College of Pharmacy – Glendale, Glendale, Arizona

Corresponding Author: Kellie J. Goodlet, Midwestern University College of Pharmacy – Glendale, 19555 N. 59th Avenue, Glendale, AZ 85308. Tel: 623-572-3535. Email: kgoodlet@midwestern.edu.

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Objective. To determine the perceptions of student pharmacists who participated in a leadership development program for student organization officers within an accelerated pharmacy program and report the change in their Emotional Intelligence Appraisal (EIA) scores.

Methods. Between 2015-2018, three different cohorts of students participated in a voluntary leadership development program, which spanned six academic quarters. The program included a variety of self-assessments and large group topic discussions, followed by quarterly individual written reflections with feedback from faculty mentors. These activities primarily addressed the topics of emotional intelligence, strengths-based leadership, and continuous leadership development. Participants’ EIA scores near the beginning and end of the program were compared. An anonymous online survey of participant perceptions was administered at the end of the program.

Results. A total of 166 student pharmacists completed all program activities. Each cohort’s final mean overall, self-awareness, self-management, and social awareness EIA scores were higher than their corresponding mean initial scores. The overall response rate for the online survey was 61%. All respondents either strongly agreed or agreed that participating in the program enhanced their leadership skills. The majority of respondents additionally rated each of the program’s activities as being either very beneficial or beneficial. The emotional intelligence assessment and strengths-based leadership assessment were most frequently cited as being very beneficial.

Conclusion. The pilot implementation of this leadership development program appears to have been both impactful and well-received. This program structure may provide an effective method for increasing the emotional intelligence of student pharmacists, particularly within accelerated pharmacy programs.

Keywords: accelerated pharmacy program, co-curriculum, emotional intelligence, leadership development, student pharmacists, student professional organizations

INTRODUCTION

Fostering the growth of pharmacy students’ leadership skills has been increasingly recognized as an essential component of professional development. However, a perceived “leadership gap” within the profession currently exists. Colleges and Schools of Pharmacy have been identified as natural settings for the introduction and reinforcement of leadership principles. The American Association of Colleges of Pharmacy Argus Commission acknowledged leadership as a responsibility for all pharmacists, and recommended leadership education on a broad scale, extending beyond traditional management coursework and integrating within extracurricular and co-curricular programs.

One key component of effective leadership is emotional intelligence. Emotional intelligence has been described as a composite of four distinct, but interrelated, skills: 1) self-awareness (accurately perceiving your own emotions in the moment and understanding emotional tendencies), 2) self-management (using awareness of your emotions to direct behavior positively), 3) social awareness (accurately perceiving and understanding emotions of others), and 4) relationship management (using emotional awareness to manage interactions successfully). Emotionally intelligent leaders are proposed to have greater professional resiliency and more effective engagement in interdisciplinary teamwork, leading to success in pharmacy practice. Therefore, the concept of emotional intelligence has been incorporated into curricular and co-curricular leadership programming. Although multiple methods have been proposed for training pharmacy leaders, the establishment of formal leadership development programs allows for diverse activity offerings to enhance students’ leadership skills while providing opportunities for reflection. Further, unlike a single didactic course,
these programs may span multiple quarters or semesters, allowing students to apply acquired leadership skills as they progress throughout the curriculum, observe different leadership styles during experiential rotations, and participate in their various leadership roles.

The success of a leadership development program offered to officers from the American Pharmacists Association-Academy of Student Pharmacists (APhA-ASP) chapter at Midwestern University College of Pharmacy-Glendale (MWU-CPG) has been described by Raney and Bowman. This program was originally created to offset the accelerated nature of MWU-CPG’s three-year PharmD curriculum, which is implemented through a year-round, four-quarter system and places a greater time limit on the leadership experience students gain while serving as elected officers. While the program successfully expanded upon officers’ traditional duties, reproducibility of these results in a larger sample was unknown; thus, the program was subsequently expanded as a voluntary program to all student officers, and eventually to all students, at MWU-CPG. The objective of this study was to evaluate the impact of a multi-modal, longitudinal student leadership development program targeted toward student organization officers within an accelerated pharmacy program. The effectiveness of the program was assessed by comparing participants’ Emotional Intelligence Appraisal (EIA) scores at the beginning and end of the program, as well as through a student perception survey administered following program completion.

METHODS

The leadership development program was initially offered to Class of 2017 students elected to a position within a student organization, which typically occurs during the first didactic year. The program was similarly offered to students within the Classes of 2018 and 2019; however, the enrollment strategy differed slightly with each cohort (Figure 1). The program consisted of a series of activities during each of the subsequent six quarters, concurrent to their elected terms. Quarterly activities included readings, self-assessments, large group topic discussions, and individual written reflections with feedback from faculty mentors. These activities addressed topics such as emotional intelligence, strengths-based leadership, team dysfunctions, and continuous leadership development. Eligible students wishing to participate subsequent to the initial recruitment process were enrolled at the halfway point and were required to make-up any previous activities.

Discussions were scheduled early in the quarter as one-hour large group lunch meetings that aimed to expose students to each leadership topic. Each discussion was led by members of the program’s oversight committee, which initially consisted of six faculty and typically utilized a combination of PowerPoint presentations and active learning exercises. Subsequent reflection activities, typically due within two weeks, were aimed at direct application of leadership topics to experiences as student leaders. Participants submitted completed reflections to a faculty mentor, randomly assigned from the oversight committee. The average mentee:mentor ratio throughout the study was 8:1. Mentors provided feedback on reflections and posed additional questions as needed. Menteemator assignments were maintained throughout the program to provide consistent, longitudinal feedback and develop mentoring relationships. Following completion of all requirements, participants were awarded certificates of completion at a concluding reception. While this development program was ultimately an initiative of the faculty involved, activities were funded through the College’s Dean’s Office, which also provided administrative support.

To assess program effectiveness, participants’ initial and final EIA scores were compared. An overall emotional intelligence score was reported along with scores for each Emotional Intelligence 2.0 skill. These scores were established on a scale of 0-100, derived from a “normed” sample, and associated with a particular skill level. Participants’ resulting scores were evaluated in aggregate using descriptive statistics within Microsoft Excel 2016. Statistical analysis was conducted using Prism 8 for macOS, Version 8.2.0, and consisted of paired, two-tailed, t-tests.

An anonymous, voluntary perception survey was administered online following each cohort’s concluding reception using Qualtrics XM. The survey instrument utilized a four-point Likert scale, chosen to limit neutrality, and also included open-ended questions that asked students to 1) indicate how program activities may be improved, 2) suggest additional items for program inclusion, and 3) provide additional feedback or comments. The collected data were evaluated using descriptive statistics within Microsoft Excel 2016. Students were able to participate in the program independent of their completion of the perception survey. This research fulfilled criteria for expedited review and was approved by the MWU-CPG Institutional Review Board.

RESULTS

Across all three cohorts, a total of 206 students met eligibility and 182 students (88%) participated (Figure 1). Relative to matriculated class size, each cohort’s recruitment rate was 36%, 44%, and 37%, respectively. All student organizations were consistently well-represented with exception of Phi Lambda Sigma Chapter, which does not elect student officers. Among the participants, 166 (91%) completed all program activities. Of the 16 students who did not complete the program, nine were no longer eligible due to academic/professional difficulties, two withdrew due to
workload beyond the program, and five failed to complete all required assignments. Attrition rates and reasons for attrition were consistent across all cohorts.

Mean initial and final EIA scores were also consistent across all cohorts (Table 1). In particular, each cohort’s mean overall, self-awareness, self-management, and social awareness final scores were higher than their corresponding mean initial scores ($p<.05$). With regard to the mean relationship management final scores, only the scores for the Class of 2018 and Class of 2019 cohorts were statistically higher than their corresponding initial scores.

Of the students who completed all program activities, 102 completed the perception survey for an overall response rate of 61% (Class of 2017: 43%; Class of 2018: 59%; Class of 2019: 80%). The variation in yearly response rate was attributed to survey timing relative to course load. All respondents either strongly agreed or agreed that participating in the program enhanced their leadership skills; however, the ratio of strongly agree to agree responses for the Class of 2018 cohort (1:1) was comparatively lower than the other cohorts (6:1). A majority of respondents from each cohort (85-100%) also found each program activity to be very beneficial or beneficial to their leadership development (Table 2). However, a disproportionate amount of “somewhat beneficial” responses (69%) and the single “not beneficial” response were found among the Class of 2018 cohort. The Strengths-Based Leadership Assessment and the Emotional Intelligence 2.0 Assessment were consistently noted as the most beneficial activities.

Sixty-nine percent of respondents (70/102) provided feedback for program improvement. Forty-five percent of unique comments (38/84) referred to adding small group or individual discussions to further apply the program’s topics to the participant’s leadership experiences. The next most prevalent themes identified were “including more active learning exercises” (8/84) and “incorporating more real-life examples” (5/84). A total of 25 replies were provided when asked for any additional comments, virtually all of which were positive and complimentary.

**DISCUSSION**

This manuscript describes the largest reported study evaluating the impact of a multi-modal, longitudinal leadership development program targeted toward student organization officers within an accelerated pharmacy program. The results of the study indicate that the program positively impacted participants’ overall emotional intelligence. This impact is similar to that demonstrated by an earlier pilot study of APhA-ASP officers completing a leadership development program with the same topic structure.$^{10}$ In addition, Smith et al also found a statistically significant increase in mean overall EIA scores (pre=76.39, post=81.03; $p<.0001$) for 38 pharmacy students participating in a 3-year leadership degree option program at the University of Oklahoma.$^9$ Although the program reported by Smith et al was focused on a didactic and experiential curriculum rather than extracurricular leadership activities, it similarly incorporated activities focused on areas of emotional intelligence.$^9$ However, no comparable initiatives among accelerated pharmacy curricula have been reported, which present several distinctive challenges. In addition to a year-round increase in faculty responsibilities, the program places an additional workload upon students already experiencing a very full schedule. Therefore, several purposeful considerations were made to mitigate this workload, including 1) scheduling a majority of program activities for early in the quarter, 2) holding group topic discussions as lunch meetings with food provided, and 3) allowing students multiple weeks to prepare for the discussions and complete subsequent reflection activities.

A consistent positive impact on EIA was seen across all three cohorts, regardless of enrollment strategy. However, the lower level of program satisfaction among the Class of 2018 cohort could have been influenced by the opt-out enrollment strategy. While the program was voluntary regardless, participants’ motivation to actively enroll may represent a conscious effort to engage in the program and perceive more positive outcomes. It should be noted that while a certificate of completion was awarded, other tangible benefits such as course credit were not available. The change in enrollment strategy for the Class of 2018 cohort was subsequently made to ease the administrative burden of the recruitment process while potentially expanding the program’s cohort and was not a study objective, but the resulting observations are worth considering for future enrollments. In addition, the program was not initially offered to all students due to limited resources, particularly the number of participating faculty mentors.

There are several limitations to recognize that also present opportunities for future study. First, the results of this study characterize findings at a single, distinctive College of Pharmacy and may not be representative of experiences at other institutions. In addition, since program participants consisted almost entirely of student organization officers, potential selection bias may exist within the perception survey results. While the program may have contributed to improved emotional intelligence, each student had additional professional/personal experiences that likely influenced their EIA scoring, either positively or negatively. In addition, the practical significance of these changes is unknown, as most post-scores remained within the “with a little improvement, this could be a strength” skill level.$^{13}$ Furthermore, the EIA instrument represents only one theoretical model of emotional intelligence and does not incorporate third party viewpoints. Despite these limitations, the current study provides valuable insights for others attempting to develop the leadership skills of student pharmacists, particularly among accelerated pharmacy curricula, thereby helping to close the
perceived “leadership gap” within the pharmacy profession. These insights have also helped guide the authors’ own improvement efforts. For example, the program’s first group discussion has been revised to include an initial meet-and-greet between each faculty mentor and his/her mentees as well as some small group activities. Also, the recruitment approach has been changed to a full class opt-in at the start of the program in order to further simplify enrollment and minimize the number of secondary recruits.

CONCLUSION
The participants in the MWU-CPC leadership development program experienced a statistically significant improvement in emotional intelligence scores across three separate cohorts. The program was well-received by the participants, who self-identified benefits for their personal leadership development. Overall, this study provides a potential model for a longitudinal leadership development program for pharmacy students, as well as other health professional students.

ACKNOWLEDGMENTS
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REFERENCES
Table 1. Summary of Each Cohort’s Mean Initial and Final EIA Scores

<table>
<thead>
<tr>
<th></th>
<th>Class of 2017 (N=47)</th>
<th>Class of 2018 (N=64)</th>
<th>Class of 2019 (N=55)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Initial</td>
<td>Final</td>
<td>Initial</td>
</tr>
<tr>
<td>Overall</td>
<td>75 (9)</td>
<td>79 (9)</td>
<td>74 (8)</td>
</tr>
<tr>
<td>Self-awareness</td>
<td>74 (11)</td>
<td>80 (10)</td>
<td>74 (10)</td>
</tr>
<tr>
<td>Self-management</td>
<td>74 (12)</td>
<td>79 (10)</td>
<td>74 (10)</td>
</tr>
<tr>
<td>Social awareness</td>
<td>74 (10)</td>
<td>77 (11)</td>
<td>75 (12)</td>
</tr>
<tr>
<td>Relationship management</td>
<td>77 (10)</td>
<td>78 (10)</td>
<td>74 (11)</td>
</tr>
</tbody>
</table>

*Statistical difference (p<.05) from initial mean score
Table 2. Summary of Each Cohort’s Responses to the Survey Question Asking the Extent to which Each of the Program’s Activities was Beneficial to Their Leadership Development

<table>
<thead>
<tr>
<th>Activity</th>
<th>Class of 2017 (N=18-20)</th>
<th>Class of 2018 (N=37-38)</th>
<th>Class of 2019 (N=43-44)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Participating in the introductory group discussion on leadership and management</td>
<td>17 (89)</td>
<td>32 (86)</td>
<td>42 (98)</td>
</tr>
<tr>
<td>Completing the Emotional Intelligence 2.0 Assessment and reviewing your resulting reports</td>
<td>20 (100)</td>
<td>35 (92)</td>
<td>44 (100)</td>
</tr>
<tr>
<td>Participating in the group discussion about emotionally intelligent leaders</td>
<td>20 (100)</td>
<td>37 (97)</td>
<td>44 (100)</td>
</tr>
<tr>
<td>Completing the Strengths Based Leadership assessment and reviewing your resulting reports</td>
<td>20 (100)</td>
<td>36 (95)</td>
<td>44 (100)</td>
</tr>
<tr>
<td>Participating in the group discussion about Strengths Based Leadership</td>
<td>20 (100)</td>
<td>37 (97)</td>
<td>44 (100)</td>
</tr>
<tr>
<td>Participating in the group discussion about the Five Dysfunctions of a Team</td>
<td>17 (85)</td>
<td>34 (92)</td>
<td>44 (100)</td>
</tr>
<tr>
<td>Participating in the group discussion about continuous leadership development</td>
<td>16 (89)</td>
<td>34 (89)</td>
<td>43 (98)</td>
</tr>
<tr>
<td>Preparing the quarterly self-reflection documents</td>
<td>18 (90)</td>
<td>33 (87)</td>
<td>44 (100)</td>
</tr>
<tr>
<td>Feedback received from faculty mentor about quarterly self-reflection documents</td>
<td>20 (100)</td>
<td>36 (95)</td>
<td>44 (100)</td>
</tr>
</tbody>
</table>

*aSome respondents did not complete each of the survey items, bIncludes the single “not beneficial” response that was received
Figure 1. Leadership Development Program Recruitment and Enrollment Results by Cohort

Class of 2017

- Exclusively, offered to student organization officers
- 68 Eligible
- 13 did not opt in
- 55 Enrolled
- 47 Completed Program

Class of 2018

- Exclusively, offered to student organization officers
- 71 Eligible
- 2 opt out
- 69 Enrolled
- 64 Completed Program

Class of 2019

- Initially, offered to student organization officers
- Secondarily, offered to the remainder of the class
- 67 Eligible
- +3 from secondary recruitment
- 12 did not opt in
- 58 Enrolled
- 55 Completed Program

*aPer initial eligibility criterion