

Development of Pharmacy Students' Emotional Intelligence in a Remote Learning Environment

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BACKGROUND

- The Accreditation Council for Pharmacy Education (ACPE) standards have a clear emphasis on the development of competencies such as self-awareness and professionalism.
- Emotional intelligence (EI)** is an umbrella term that:
 - Fulfills both personal and professional competencies
 - Is comprised of affective skills (i.e., self-awareness, social aptitude, social awareness, relationship management, self-regulation) that are indispensable for pharmacists, who must possess both the knowledge and interpersonal skills to connect to, influence, and form relationships with patients and other healthcare professionals.
- The Pharmacy Skills III course at the University of the Pacific focuses on developing EI within the context of professional communication.
- COVID-19 resulted in a pivot to remote learning, which required creative strategies for providing the same level of training and feedback on EI.
- Study Objective:**
 - ✓ The primary objective of this study was to determine the impact of a remote learning course on student EI.
- Primary outcomes:**
 - ✓ Improvements in EI pre/post course and teaching assistant (TA) and self-assessed EI scores over the semester.

METHODS

- One hundred ninety-seven first-year pharmacy students participated in this study.
- Activities included:
 - ✓ Social and Emotional Development Inventory (SED-I) at baseline and at the end of the course. The SED-I comprises of 36 items which code onto 4 items (Table 1)
 - ✓ An hour-long lecture on EI and interpretation of SED-I scores.
 - ✓ Two written/video reflection exercises discussing strategies for improving their EI over the semester.
 - ✓ Nine YouTube videos developed by faculty were assigned, which depicted a professional consult and highlighted EI techniques utilized
 - ✓ Attending small-group simulations on three patient cases, with supplemental data in a simulated electronic health record program (EHRGO)
 - ✓ Zoom breakout rooms comprised of:
 - One teaching assistant (TA), who served as the patient/physician depending on the simulation, and three 1st year pharmacy students
 - Each student completed one consult, while the other two students listened and completed a peer evaluation.
 - ✓ After each simulation session:
 - TAs assessed each student's EI using an eight-item grading rubric that coded onto the four SED-I factors and provided feedback on the student's communication skills and EI. Students also assessed their own EI using the same rubric (Table 2)
 - Student satisfaction with each component was measured (Figure 1).
- SED-I scores and TA/peer/self-assessments were analyzed using the Mann-Whitney rank test; descriptive analysis using Excel was used for the satisfaction survey.

RESULTS

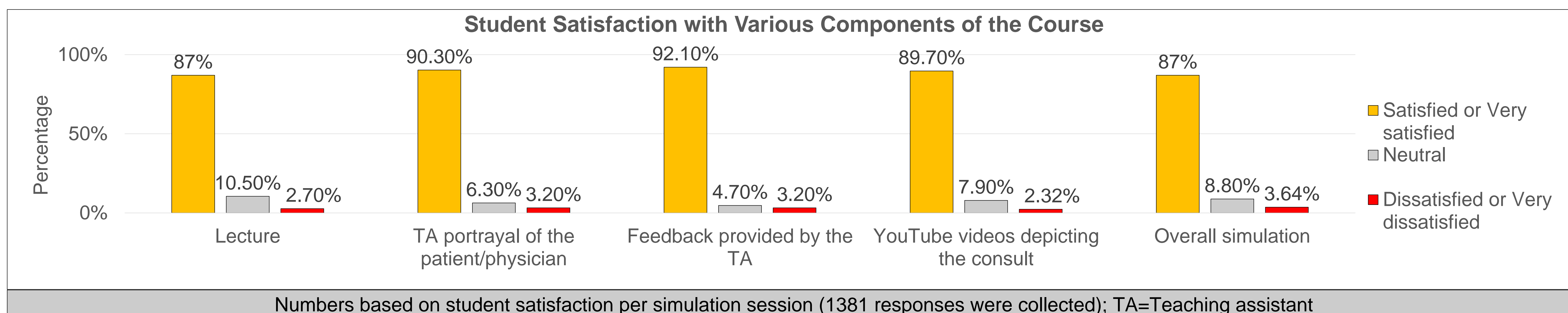


Table 1: Pre/Post Social and Emotional Development Inventory (SED-I) (N=197)

Survey Item	Absolute Change	Percentage Change
Empathy (Consideration)	3.38*	0.09*
Monitoring (Consideration)	3.26*	0.09*
Intimacy (Connect)	3.21*	0.08*
Aptitude (Self-Awareness)	3.19*	0.088*
Initiative (Influence)	2.95*	0.08*
Inspiration (Influence)	2.95*	0.08*
Emotions (Self-Awareness)	2.95*	0.08*
Sociability (Connect)	2.59*	0.07*

* Indicates a p-value ≤ 0.05

Baseline: lowest scores on items related to 'influence' on SED-I (74% of students)
End of the semester: statistically significant improvement on all dimensions of the SED-I with largest gains noted on "consideration of others".

Table 2: Longitudinal Evaluation of Emotional Intelligence (N=197)

Survey Item Statement stem: "This student was able to:"	Change (%) (TA-Assessed)	Change (%) (Self-Assessed)
Consider the patients/physicians perspective before acting (Consideration)	1.07 (0.10)*	0.86 (0.08)*
Inspire and motivate the patient/physician (Influence)	1.06 (0.10)*	1.08 (0.10)*
Develop or form a relationship with the patient/physician (Connect)	0.93 (0.09)*	0.86 (0.087)*
Be aware of his/her own strengths/weaknesses (Self-awareness)	0.87 (0.08)*	0.68 (0.06)*
Take initiative during the interaction (Influence)	0.82 (0.08)*	0.79 (0.07)*
Demonstrate empathy (Consideration)	0.79 (0.079)*	0.73 (0.07)*
Be sociable and friendly (Connect)	0.77 (0.07)*	0.65 (0.06)*
Be in control of his/her emotions (Self-awareness)	0.71 (0.07)*	0.60 (0.06)*

After the simulated consults, TAs rated student, and students self-rated on a scale of 1 to 9; 9=Always; 1=Never
 * Indicates a p-value ≤ 0.05

- TA/peer-assessed** total scores improved over the semester. **Self-assessments** also improved, with largest gains noted on items that coded to 'influence'.
- Majority of students were "very satisfied or satisfied" with the course, especially the "quality of TA feedback" and the "TA's portrayal of the patient/physician."
- Interrater variability between TAs and peers showed no statistical difference.
- 84% of students agreed or strongly agreed with the statement, "**this course was instrumental in helping me understand my EI.**"

DISCUSSION

- This study showed improvement in all areas of the SED-I which was encouraging.
- Self-assessment as well as TA assessment of perceived EI also improved longitudinally which demonstrates improved perceived and self-perceived EI. Interrater reliability was met in this study which suggests that the TA/self rubric was reliable.
- Students reported highest satisfaction with "Feedback provided by TA" and "TA portrayal of the patient" suggesting the continual need to incorporate hands-on experiences, while providing one-on-one feedback on performance to enhance learning improvements.

LIMITATIONS

- The TA and self-assessment rubric was based on only 8 items versus the 36 items on the SED-I. The rubric was developed by course faculty and while it used the same language as the SED-I, validity analysis was not performed.
- Use of standardized patients versus student TAs could have created a more realistic sense on student learning.

CONCLUSIONS

- This model can be effective in teaching pharmacy students both technical skills and communication techniques necessary for practice in ambulatory settings.
- Based on improvements in the SED-I and self/TA/peer assessments and overall positive student feedback, other educators may adopt this strategy to improve student EI in a remote learning environment.

FUTURE DIRECTIONS

- Future studies will focus on implementing new key improvements to future course offerings, such as utilizing standardized patients, assigning more frequent OSCEs, and providing further instructions on remote monitoring tools.
- More research is needed to measure impact of telehealth learning on student's performance and EI with continual improved course designs.

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