

Empathy, Burnout, and Emotional Intelligence in Incoming USF Pharmacy and Medical Students

Ainslee Juarbe MS4
USF MCOM- LVHN Campus

Jeanne L. Jacoby MD
Lehigh Valley Health Network, Jeanne_L.Jacoby@lvhn.org

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Empathy, Burnout, and Emotional Intelligence in Incoming USF Pharmacy and Medical Students

Ainslee Juarbe, MS4, Mentor: Jeanne L. Jacoby, MD

Lehigh Valley Health Network, Allentown, Pennsylvania

Background

Research studies currently demonstrate decreased empathy, emotional intelligence (EI), and high levels of burnout among professionals within the healthcare workforce. Studies have additionally shown that levels of empathy tend to decline throughout the years of medical training. Previous studies have primarily focused on medical student levels of burnout, empathy, and EI, yet few have looked at the same in pharmacy students throughout their training. This study will analyze levels of empathy, burnout, and EI in the incoming Pharmacy students of the University of South Florida (USF), and will compare them to the incoming medical students of both the Core and SELECT courses.

Problem Statement

Using the Jefferson Scale of Empathy (JSE), Maslach Burnout Inventory (MBI), and Emotional Intelligence and Social Competency Inventory (ESCI), what are the current states of empathy, burnout, and EI of incoming medical and pharmacy students at USF?

Methods

The JSE, MBI, and ESCI are tools widely used to measure empathy, burnout, and EI, respectively. The Jefferson Scale of Physician Empathy, medical student version (JSPE-MS) is a 20-question survey used to measure empathy, scored on a scale from 20-140. Higher scores on the JSE connote higher levels of empathy. The Maslach Burnout Inventory Student Survey (MBI-SS) is a 16-question survey, designed to measure burnout in students through analysis of three separate domains. The ESCI is a 72-question survey tool that assesses and measures emotional and social behaviors of its respondents through analysis of 12 competencies. An additional 11 demographic questions were added to the survey and were assessed to determine any potential correlation between empathy, burnout, and/or EI. Surveys were disseminated to all incoming USF medical and pharmacy students (N=274) using an anonymous, de-identified email link to a secure survey platform. Students were assigned two or more of the surveys to complete. Using Excel, correlational analyses and analysis of variance were used to examine relationships and group differences between the pharmacy, and Core and SELECT medical classes.

Results

Figure 1. Average JSE scores for USF Programs

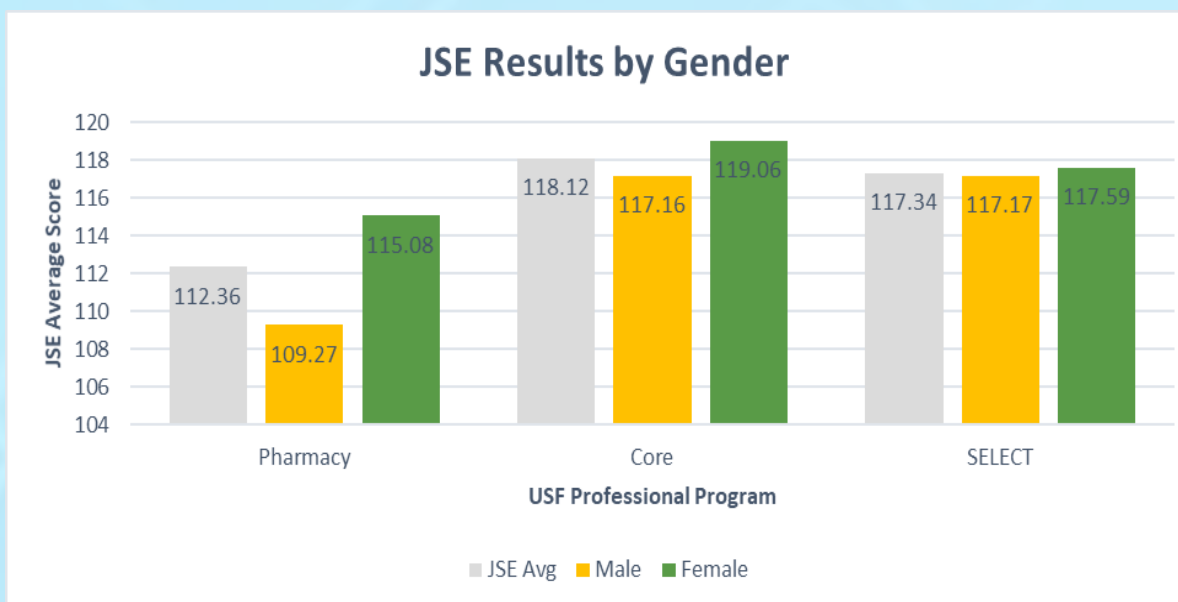
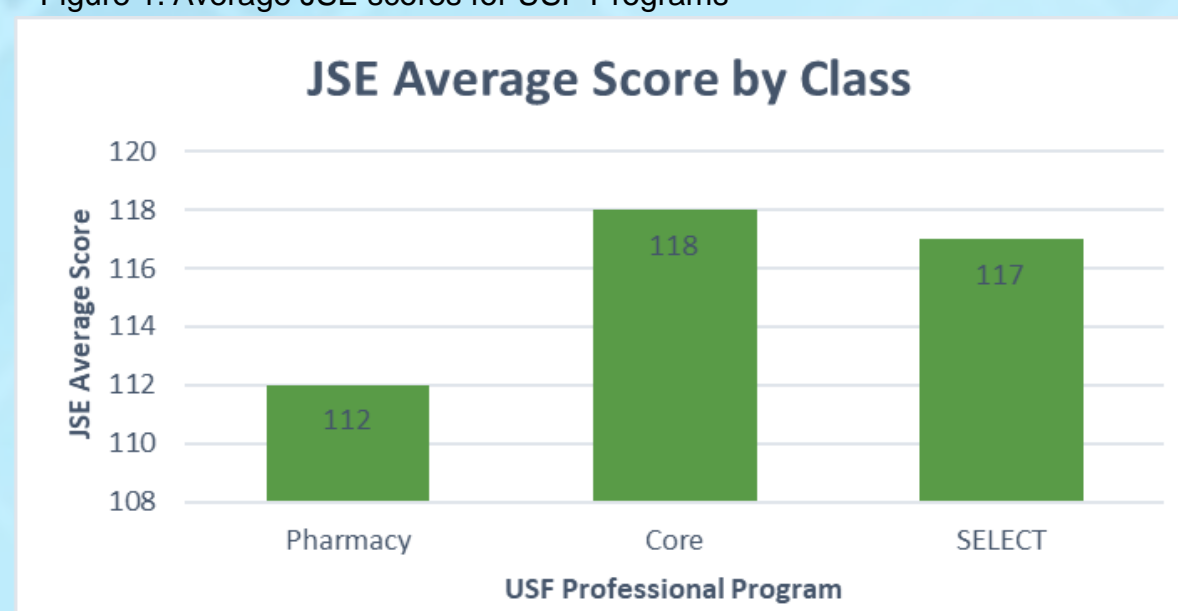


Figure 2. Comparison of Empathy by Gender and Program

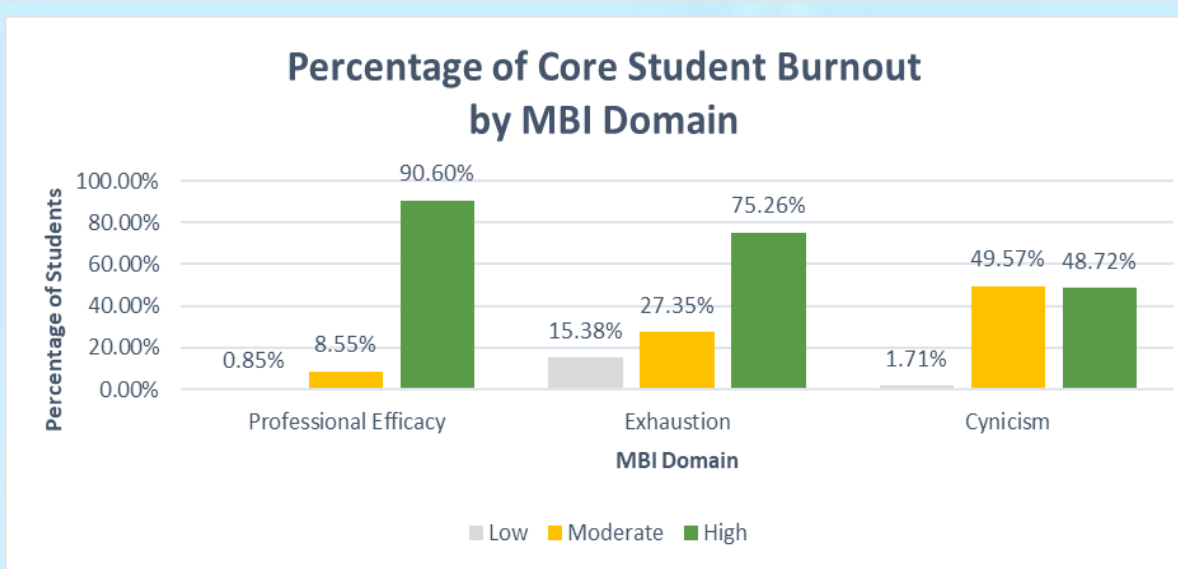
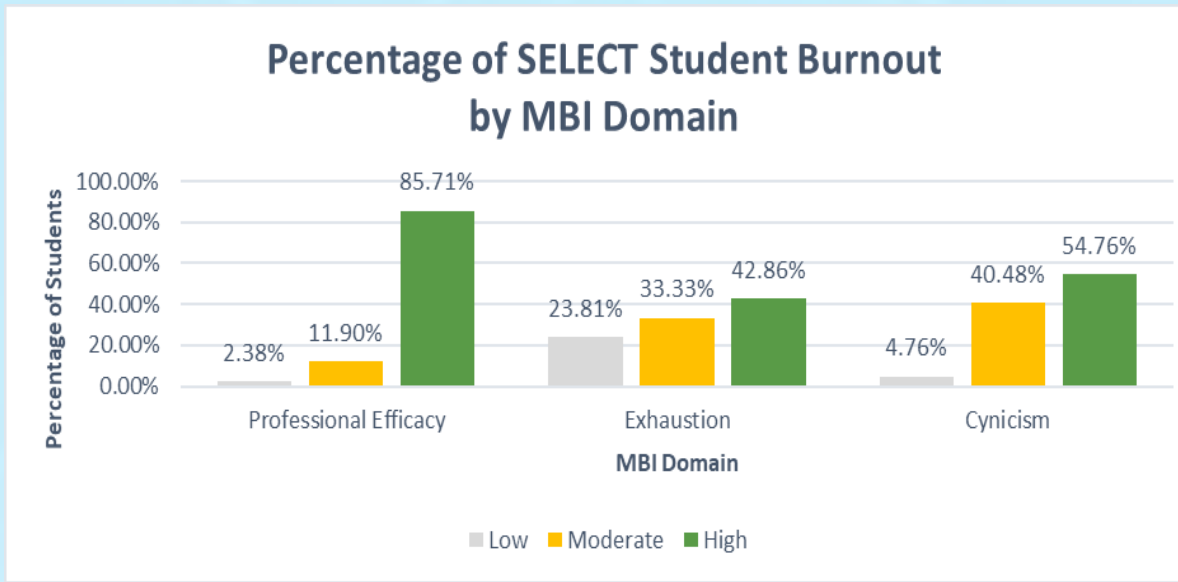
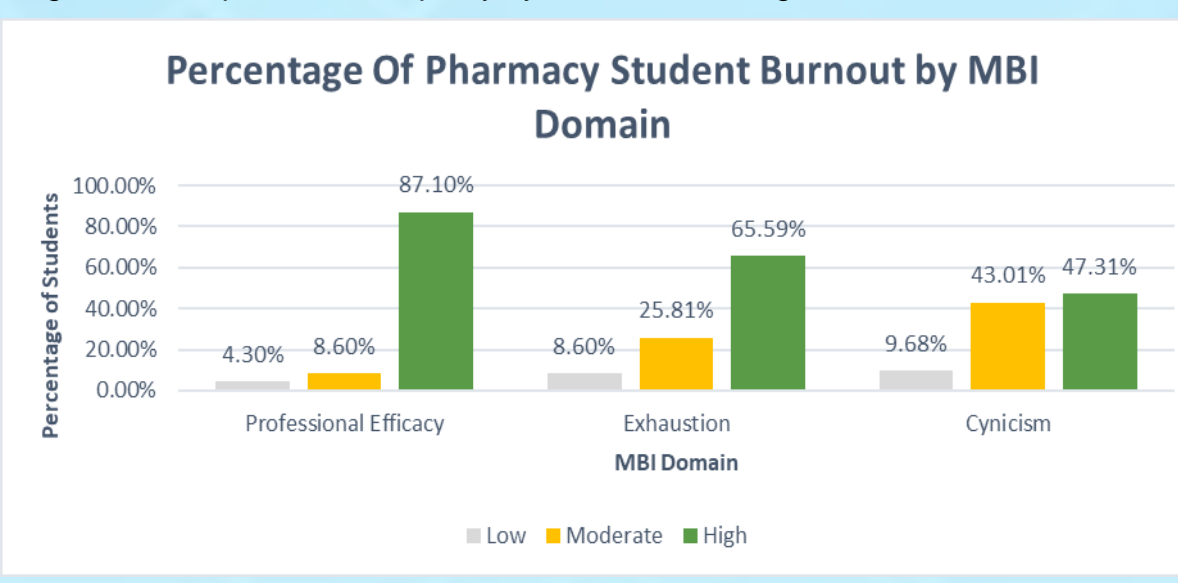


Figure 3. Comparison of Burnout by MBI Domain

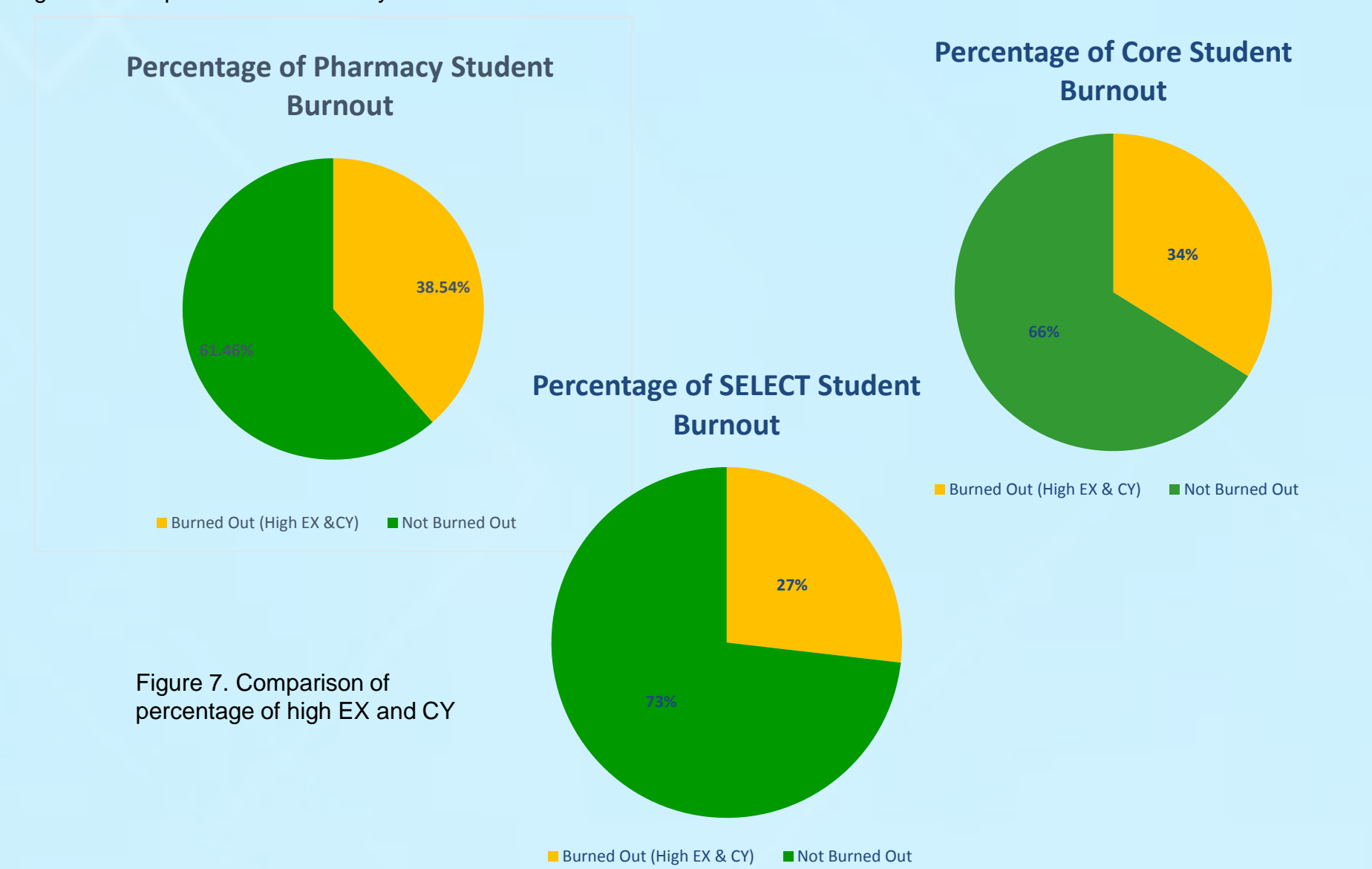


Figure 7. Comparison of percentage of high EX and CY

ESCI Competency	Pharmacy	Core
Organizational Awareness	4.24	3.98
Conflict Management	3.44	3.81
Inspirational Leadership	3.93	3.70

Table 2. Comparison of ESCI Competencies by USF Program

267 responses were gathered (N=274) with a 97% completion rate. Demographic questions looked at gender, age, marital status, parental status, and specialty of interest. The mean levels of empathy on the JSE for Pharmacy was 112 (SD=12); Core 118 (SD=11); SELECT 116 (SD=11). Analysis of variance on empathy scores yielded an $F = 7.50$ and $p = 0.0007$. Post-hoc analysis determined a statistically significant difference in empathy between the Core and Pharmacy students. Analysis of MBI results showed high levels of Exhaustion in Pharmacy (Average=19) and Core students (Average=17), and high levels of Professional Efficacy and Cynicism in all classes. Twelve ESCI competencies were analyzed among pharmacy and Core classes, with significant findings in 3 categories.

Gender	Count	Percentage
Male	133	49.81
Female	134	50.19
Total	267	
Program	Count	Percentage
USF Core	130	48.69
USF SELECT	41	15.36
USF Pharmacy	96	35.96
Total	267	
Age Range	Count	Percentage
<22	45	17.98
22-24	148	55.43
25-27	50	18.73
28-30	8	3
31-33	7	2.62
34-36	2	0.75
>36	3	1.12
Total	263	
Marital Status	Count	Percentage
Single	224	83.90
Married	42	15.73
Separated/Divorced	1	0.37
Total	267	
Children	Count	Percentage
Yes	8	3
No	259	97
Total	267	
Specialty (Medical Students Only)	Count	Percentage
Anesthesiology	2	1.17
Family Med/General Practice	9	5.26
Neurology	4	2.34
Otolaryngology	2	1.17
Pediatrics	5	2.92
Radiology	4	2.34
Dermatology	6	3.51
OB/GYN	4	2.34
Orthopedic Surgery	16	9.56
Psychiatry	1	0.58
Emergency Medicine	14	8.19
Neurology	4	2.34
Ophthalmology	2	1.17
Pathology	3	1.75
Plastic Surgery	3	1.75
Radiation Oncology	1	0.58
Hematology/Oncology	3	1.75
Endocrinology	3	1.75
Gastroenterology	3	1.75
Cardiology	4	2.34
Infectious Disease	2	1.17
Cardiothoracic Surgery	1	0.58
Trauma Surgery	1	0.58
General Surgery	1	0.58
Interventional Radiology	1	0.58
Radiation Oncology	1	0.58
Other	11	6.43
Undecided	60	35.09
Total	171	

Table 1. USF Respondent Demographics

Discussion

- Empathy levels for USF pharmacy students are higher, at 112, than have been shown in other studies, at 110, yet are significantly lower than those of the medical students
- The Core and SELECT medical students' average levels of empathy match those of first year students in other similar studies (range: 115-123)
- With respect to gender, similar patterns seen for pharm/medical students and practicing physicians levels of empathy
- High levels of PE at the beginning of their graduate medical education
- About 1/3 of each of the classes meet two of the three domain classifications for burnout
- Further research could be done to explore whether high PE serves as a protective factor against burnout for students during graduate healthcare education
- Curriculum changes at other schools includes: Patient experience simulation, Promotion of volunteerism
- Attenuation in self-serving behavior and medical authoritarianism

Conclusions

- Empathy, burnout, and EI states of USF pharmacy and medical students match those of students at other institutions.
- Studies show incoming students have the highest levels of empathy and lowest levels of burnout, though they tend to decline throughout years of schooling.
- This research will serve as a baseline for studying the progression of empathy, burnout, and EI for this class of medical and pharmacy students at USF throughout their years of training.
- Hopefully, results from this study provide administrative faculty from the USF College of Pharmacy and MCOM with data that will encourage change for promotion of wellness within the curriculum.

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