

Exploring the Relationship Between Sense of Belonging and Burnout Experience Among Pharmacy Students: A Quantitative-Comparative Study

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INTRODUCTION/PROBLEM

Studies suggest that pharmacy students experience significant burnout and wellness challenges. It has been previously identified that a sense of belonging can positively influence well-being, however, gaps exist in understanding the relationship between belonging and burnout, particularly in U.S. pharmacy programs.

- This study aims to explore the relationship between sense of belonging and burnout among pharmacy students enrolled in all four professional years at Southern Illinois University Edwardsville's School of Pharmacy.
- The findings from this study will enhance understanding of how belongingness impacts student well-being and thus inform targeted interventions that may be developed to address burnout in higher education.

INFLUENCERS OF PROBLEM

- Primary Endpoint:** what is the prevalence and severity of burnout by students' sense of belonging?
- Secondary Endpoint:** what correlation exists between secondary co-factors – age, gender, current professional year, gap years, prior degrees, dual degrees, specialization, graduation cohort, extracurricular involvement and work hours – and burnout experience?

ASSESSMENT OF PROBLEM INFLUENCERS

This quantitative-comparative study utilized a Qualtrics survey to collect demographic information, assess burnout, and evaluate sense of belonging.

- Maslach Burnout Inventory-General Survey for Students (MBI-GS (S))** – measured students' levels of exhaustion, cynicism and professional efficacy through a series of frequency-rated statements, assessing the prevalence and severity of burnout symptoms. The MBI-GS (S) is the gold standard for burnout assessment.
- Sense of Belonging Scale-Revised** – measured students' sense of belonging through perceived peer support, classroom comfort, and faculty support.

The survey was distributed to all students enrolled at Southern Illinois University Edwardsville's School of Pharmacy at the beginning of the 2024-2025 school year, with data collection spanning 7 months.

Data analysis was performed using **IBM© SPSS© Statistics software**.

- Descriptive statistics (means, standard deviations and frequency distributions) were employed to summarize survey responses.
- Multiple linear regression analysis was conducted to examine the relationship between students' sense of belonging and their levels of burnout. This analysis quantified how much of the total variation in student burnout (the dependent variable) was explained by the different sense of belonging categories (the independent variables or predictors), as indicated by the coefficient of determination (R^2).
- ANOVA tests were conducted to compare burnout levels across students grouped by age, professional year, gap year status and work hours. These tests assessed the variance both within and between the groups, ultimately producing F-statistics to determine whether the observed differences are statistically significant ($p < 0.05$).
- The independent sample t-tests were used to compare the burnout levels among students based on gender, prior degrees, dual degree status, specializations, graduation cohort and extracurricular involvement., with the t-statistic measuring the magnitude of the difference relative to the variability in the data (statistical significance set a $p < 0.05$)

SOLUTION

- Sense of belonging, specialization and extracurricular involvement play notable roles in shaping professional efficacy.
- Interventions aimed at fostering a supportive academic environment, promoting specialization opportunities and encouraging extracurricular participation may enhance pharmacy students' resilience against burnout.
- Future research should further explore the near-significant trends observed in gap year status and cynicism to develop targeted strategies for reducing burnout in pharmacy students.

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KEY RESULTS

Table 1: Relationship Between Pharmacy Student's Sense of Belonging and Burnout

MBI-GS (S) Subscale	Burnout Questions	R ²	F-Statistic (p-value)	Perceived Peer Support (β, p)	Perceived Classroom Comfort (β, p)	Perceived Faculty Support (β, p)
Exhaustion (EX)	Questions 1-4; 6	0.014	0.2713 (0.846)	0.0935 (0.420)	-0.0500 (0.799)	-0.0693 (0.555)
Cynicism (CY)	Questions 8-9; 13-15	0.019	0.3734 (0.772)	0.0159 (0.907)	-0.0239 (0.868)	-0.0897 (0.480)
Professional Efficacy (PE)	Questions 5-7; 10-12; 16	0.252	6.510 (0.0007)	0.2719 (0.062)	0.2692 (0.081)	-0.0738 (0.515)

Table 8: Relationship Between Pharmacy Student Specialization and Burnout

MBI-GS (S) Subscale	Burnout Questions	Yes (N = 11)		No (N = 49)		T-Statistic	Significance (p < 0.05)
		Mean	SD	Mean	SD		
Exhaustion (EX)	Questions 1-4; 6	21.1	6.2	23.5	5.3	-1.20	0.25
Cynicism (CY)	Questions 8-9; 13-15	15.4	6.7	17.6	7.0	-1.01	0.33
Professional Efficacy (PE)	Questions 5-7; 10-12; 16	27.2	5.3	23.3	6.1	2.14	0.048

Table 10: Relationship Between Pharmacy Student Extracurricular Involvement and Burnout

MBI-GS (S) Subscale	Burnout Questions	Yes (N = 44)		No (N = 16)		T-Statistic	Significance (p < 0.05)
		Mean	SD	Mean	SD		
Exhaustion (EX)	Questions 1-4; 6	22.3	5.7	23.3	5.0	-0.22	0.83
Cynicism (CY)	Questions 8-9; 13-15	17.3	6.9	16.9	7.2	0.22	0.82
Professional Efficacy (PE)	Questions 5-7; 10-12; 16	25.1	5.6	21.1	6.6	2.16	0.041