Breaking the Stigma: Unveiling the Truth About Fear of Failure in First Year Pharmacy Students

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BACKGROUND

- With the decline in the number of applications to schools/colleges of pharmacy across the United States, it is becoming more important to ensure the students that do get enrolled into a Doctor of Pharmacy program are successful.
- Fear of failure may be defined as "temporary cognitive and emotional reaction towards environmental stimuli that are apprehended as threats in achievement contexts".
- As students enter graduate school the pressure surrounding failure may worsen as they may judge the achievement context to be much more demanding.
- The performance failure appraisal inventory (PFAI) is a validated tool developed to measure student's beliefs in consequences of failure in the community, athletic, and general undergraduate populations.
- The tool was later modified and re-validated for undergraduate students in science, technology, engineering, and mathematics resulting in the modified PFAI (mPFAI).

METHODS

- Study Objectives:
  - To characterize first year pharmacy students' attitudes towards failure upon entering the Doctor of Pharmacy program and following the first semester.
  - To evaluate whether student response to failure changes as they progress through the first professional year.
- Study Population:
  - First year pharmacy students were invited to complete two surveys; one in Fall 2022 and one in Spring 2023
  - Students were given class time to encourage participation and each survey remained open for 2 weeks
- Survey Domains:
  - Study habits and academics
  - Response to failure
  - Attitudes and beliefs regarding failure (mPFAI)
    - Rate each belief statement on a 5-point scale ranging from -2 to +2
    - Scores for each participant were calculated into an overall score
  - Personal definition of failure (open ended response)
  - Demographics
- Data Analysis
  - Aggregate mPFAI scores were compared between fall and spring semester to assess overall response to failure
  - For students that completed both the fall and spring surveys, answers were compared to evaluate a change in response to failure.
  - Qualitative analysis was used to identify themes in student's personal definitions of failure.

Fear of failure did not change from the first to second semester of the curriculum for first year pharmacy students.
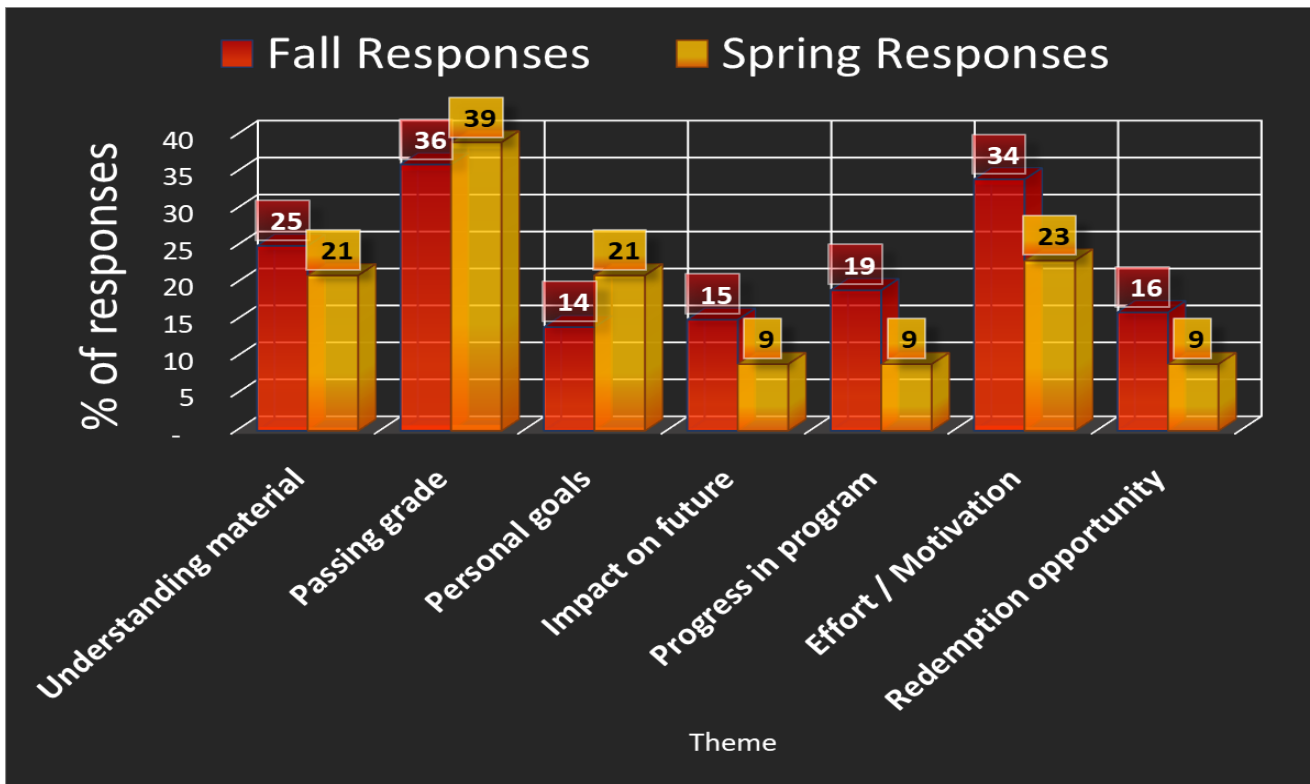
Example Definitions of Failure

"I wish I could say otherwise, but failure usually causes me to shut down. I've always worked extremely hard in everything I do so when I give my 100% and still fail, I usually just quit."

"Failure is not achieving the goals originally set. It isn't always a reflection of your work ethic, knowledge, or understanding, but just a reflection of the final performance. Failure isn't always bad, it can be used to help one learn from their mistakes and strive to do better in the future."

"It means you fail. Did not get the percentage you needed to pass the course. This does not mean you should stop moving forward or give up just do it again, it sucks but so does giving up."

"To me a failure of a course doesn't, necessarily represent what I'm capable of, but it would significantly bring down my confidence in myself and I would feel as though I'm not smart enough"

"To me failure of a course means not getting a passing grade and not being able to continue on the sequence towards becoming a college graduate. Failure of a course can also include still getting a passing grade but not learning content that will help in future courses, setting yourself up for failure."

"Failure of a course means I do not reach the minimum grade required to pass the course."

FIGURE 1: *Personal Definitions of Failure*

FIGURE 2: *mPFAI data by demographics (spring data)*
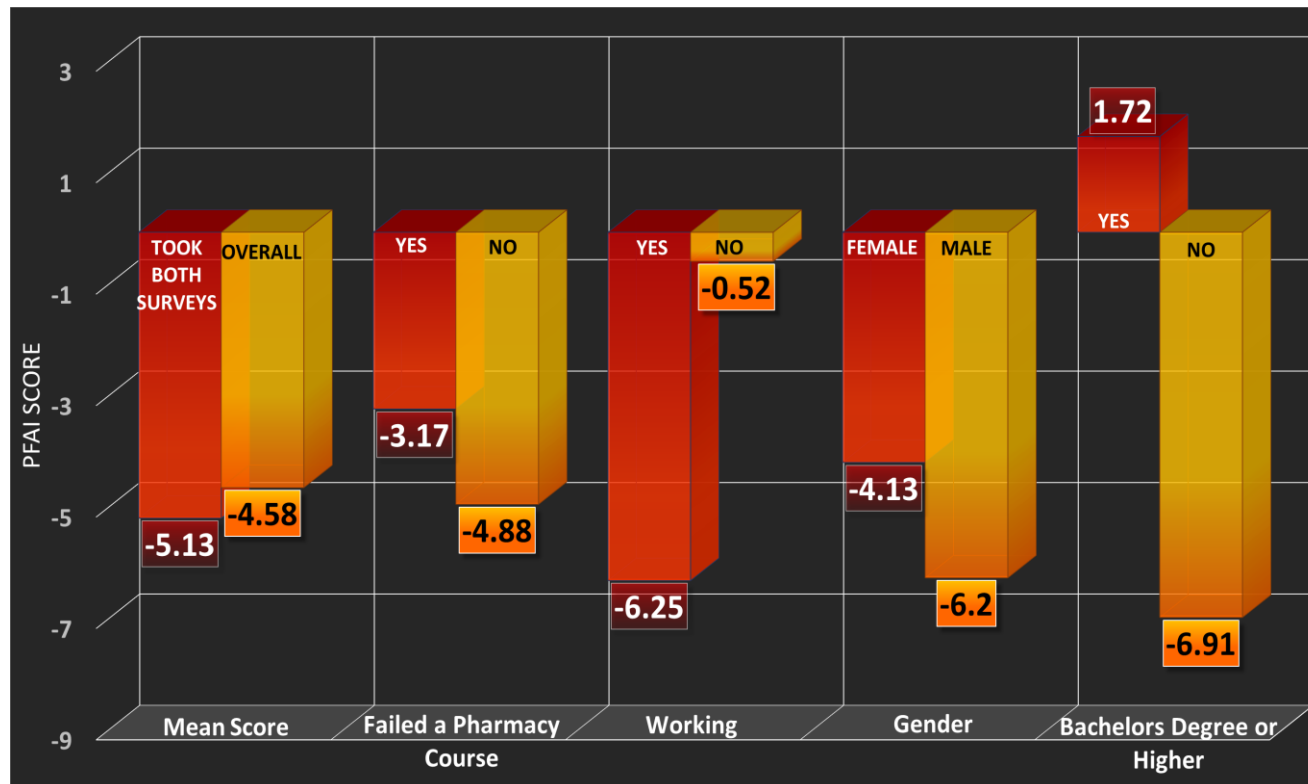
RESULTS

Survey Response Rate
- Fall 2022: 89/107 (83.2% response rate)
- Spring 2023: 72/108 (66.7% response rate)
- 44 students completed both surveys (41.1%)

Definition of Failure Themes
- Grades – comments focused on receiving a specific percentage or grade in a course
- Effort – comments focused on amount of effort the student put forth
- Learning – comments focused more on learning concepts rather than grades
- Success – comments focused more on overall success

TABLE 1: *Baseline Demographics & mPFAI Results*

	Fall 2022 n = 89	Spring 2023 n = 72	*p*-value
Gender, n (%)			
Female	59 (66.3)	45 (62.5)	
Male	29 (32.6)	25 (34.7)	
No response	1 (1.1)	2 (2.8)	
Previously failed or withdrew from a college course, n (%)	36 (40.4)	N/A	
Previously failed or withdrew from a pharmacy course, n (%)	N/A	7 (9.7)	
Level of education completed, n (%)			
Associate's degree or lower	64 (71.9)	53 (73.6)	
Bachelor's degree or higher	25 (28.1)	18 (25)	
Aggregate mPFAI score	-6.98 ± 11.3	-4.58 ± 14.1	0.47
Matched mPFAI score	-7.52 ± 11.0	-5.13 ± 13.1	0.19

LIMITATIONS

- Small sample size at one college of pharmacy
- Only looked at first year pharmacy students
- Length of survey may have caused response fatigue or drop-outs
- Lacked institutional data on student performance and relied on student's own assessment of failure

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