

First-Generation Pharmacy Students: Academic and Non-Academic Factors That Can Affect Pharmacy Student Success

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Background

- A first-generation (FG) student is a student whose parent(s) or legal guardian(s) have not received a bachelor's degree or higher.
- The first professional year is vital and often predictive of the trajectory of a student's academic performance and progression through the Doctor of Pharmacy (PharmD) curriculum.
- While current literature exists to support FG undergraduate students, there is limited evidence on FG PharmD students along with strategies needed to aid in their successful transition to a pharmacy professional program.

Objective

- To evaluate the academic transition of first-generation (FG) students to a Doctor of Pharmacy (PharmD) program.

Methods

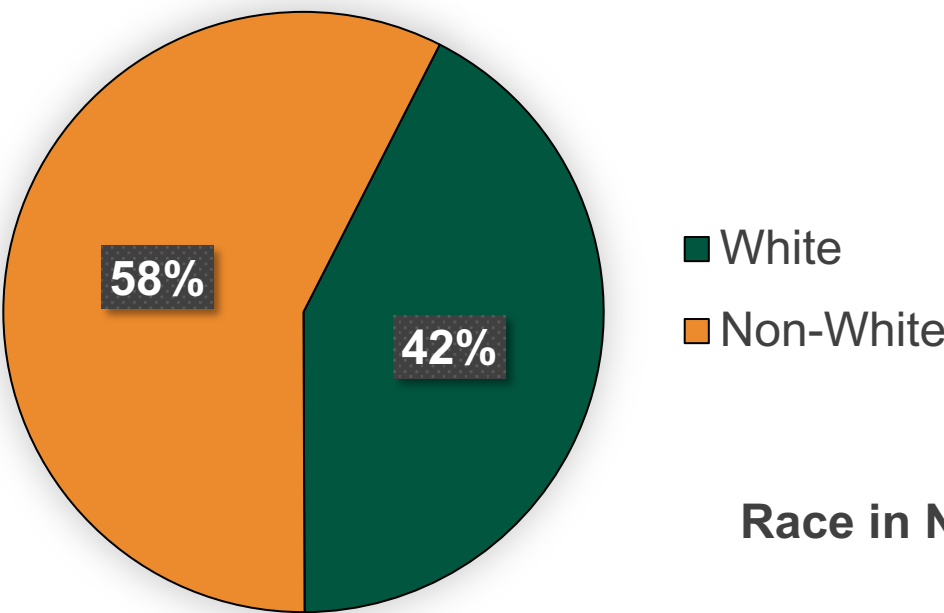
- Retrospective study looking at the transition of pharmacy students entering in Fall 2020, 2021, and 2022.
- Student demographics, including generational status and undergraduate academic performance, was collected from the Pharmacy College Application Service (PharmCAS). Scores from the Grit test, Clance Impostor Phenomenon test (CIPS), Cognitive Testing Anxiety test (CTA-S), and Perceived Student Stress test (PSS-10) were gathered prior to the Fall term.
- Data was gathered on students who met early intervention criteria from the College of Pharmacy Early Intervention Program.
 - Fall 2022 new addition:** required meeting after exam one with the Associate Dean for Academic Affairs after a holistic evaluation of the student.
- Outcomes evaluated included Fall grades and cumulative GPA, academic status, and progression in the curriculum.
- Mann-Whitney tests were used for continuous variables and Chi-Square tests with risk estimates were used for categorical variables. Statistical significance was set at a $p < .05$.

Results

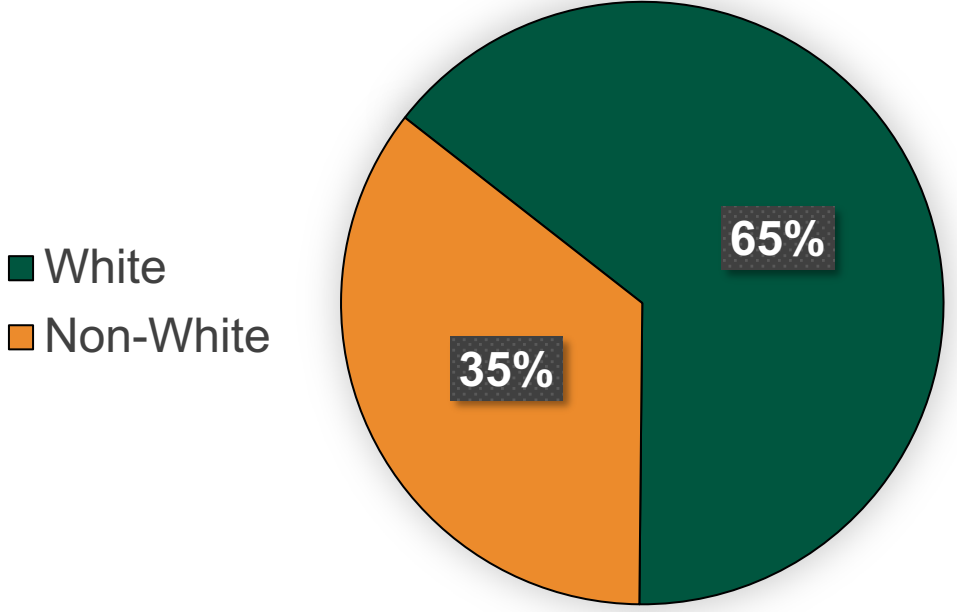
UTHSC College of Pharmacy Demographics Total n=426	First-generation n=151 (35.4%)	Non-First Generation n=275 (64.6%)
Term beginning, n (%)		
Fall 2022 (class of 2026)	38 (38.0%)	62 (62.0%)
Fall 2021 (class of 2025)	47 (33.8%)	92 (66.2%)
Fall 2020 (class of 2024)	66 (35.3%)	121 (64.7%)
Sex, n (%)		
Female	99 (68.8%)	193 (70.2%)
*Age, n (%)		
25 yrs. or less	124 (82.1%)	256 (93.1%)
26 yrs. or older	27 (17.9%)	19 (6.9%)
*Relationship status, n (%)		
Single	70 (46.7%)	181 (66.3%)
GPA, mean (SD)		
Undergraduate cumulative GPA	3.35 (0.38)	3.42 (0.39)
Undergraduate science GPA	3.16 (0.49)	3.26 (0.48)

**Indicates results that were statistically significant*

Race in First-Generation Students

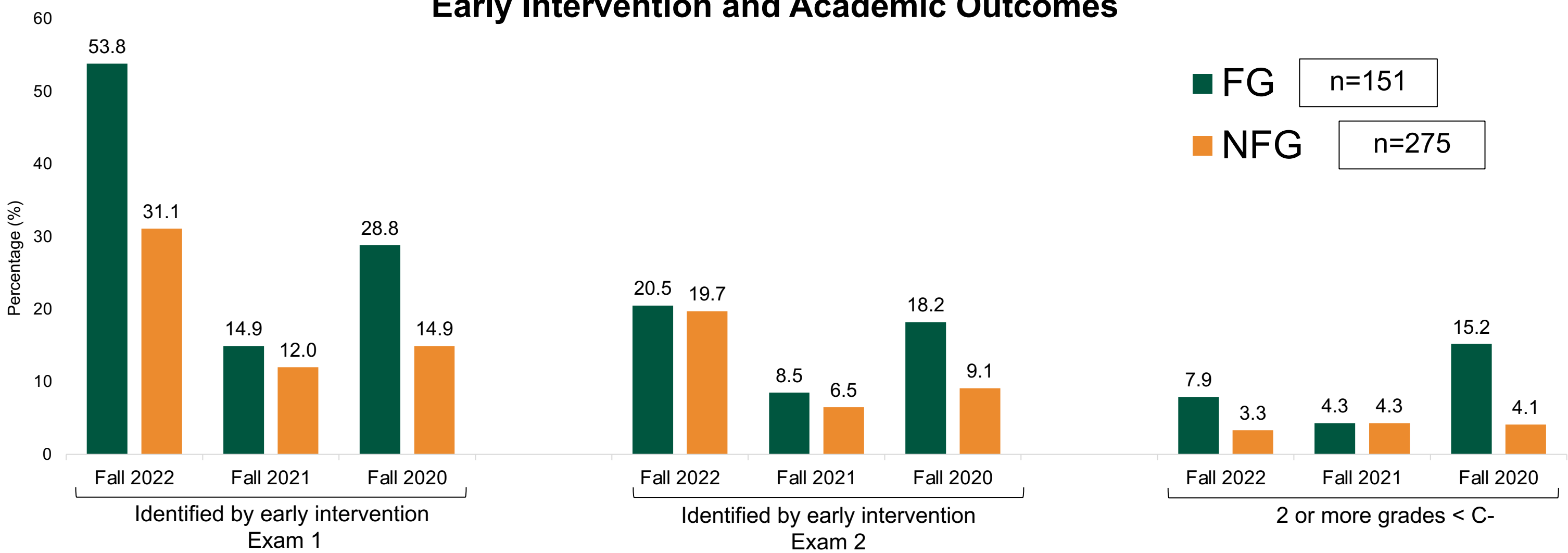


Race in Non-First Generation Students



Non-White = Black, Asian, Mixed, Unknown

Early Intervention and Academic Outcomes



- FG students were more likely to meet early intervention criteria after exam 1. There was no difference between FG and NFG students after exam 2.
- A required academic meeting for Fall 2022 resulted in a greater reduction in FG students meeting early intervention from exam 1 to 2.
- FG students were more likely to receive 2 or more grades less than C- at the end of the Fall term compared to NFG students.

Conclusions/Implications

- First-generation (FG) students prove to be a more vulnerable population at a greater risk for academic struggle.
- FG students are more likely to be underrepresented minorities, over the age of 25 years, and be in a relationship (including married).
- FG students are more likely to struggle academically upon initial transition to the Doctor of Pharmacy (PharmD) curriculum compared to non-FG students.
- The implementation of targeted early intervention strategies demonstrates improvement in FG students' academic performance.
- PharmD programs should establish proactive mechanisms to support FG students as they transition to the professional program.

Limitations

- A single, public institution
- First cohort (class of 2024) matriculated during the COVID-19 pandemic (remote classes)
- A single semester was evaluated for each class

For additional information

