

The Impact of Mentoring on Imposter Phenomenon in Medical Students

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Introduction

- Imposter Phenomenon (IP) refers to feelings of self-doubt and perceived phoniness, where individuals attribute successes to external factors¹.
- Once thought to affect mainly high-achieving women, IP is now recognized to affect those across diverse academic and professional settings.
- IP is particularly troubling amongst medical students and physicians, as it is linked to higher rates of depression and burnout².
- Lower levels of belongingness commonly noted in underrepresented medical students may further contribute to IP and higher attrition rates³.
- Increasing retention rates of historically underrepresented medical students and physicians has been associated with not only strengthening workplace diversity but also improving patient care³.
- While research shows mentoring can significantly reduce IP in academic settings⁴, there is little focus on the effect of mentoring on IP in mentors.

Aims and Objectives

Assess whether mentorship participation reduces reported imposter phenomenon in first-year medical students, Further evaluate mentorship participation and IP in students considered underrepresented in medicine.

Methods

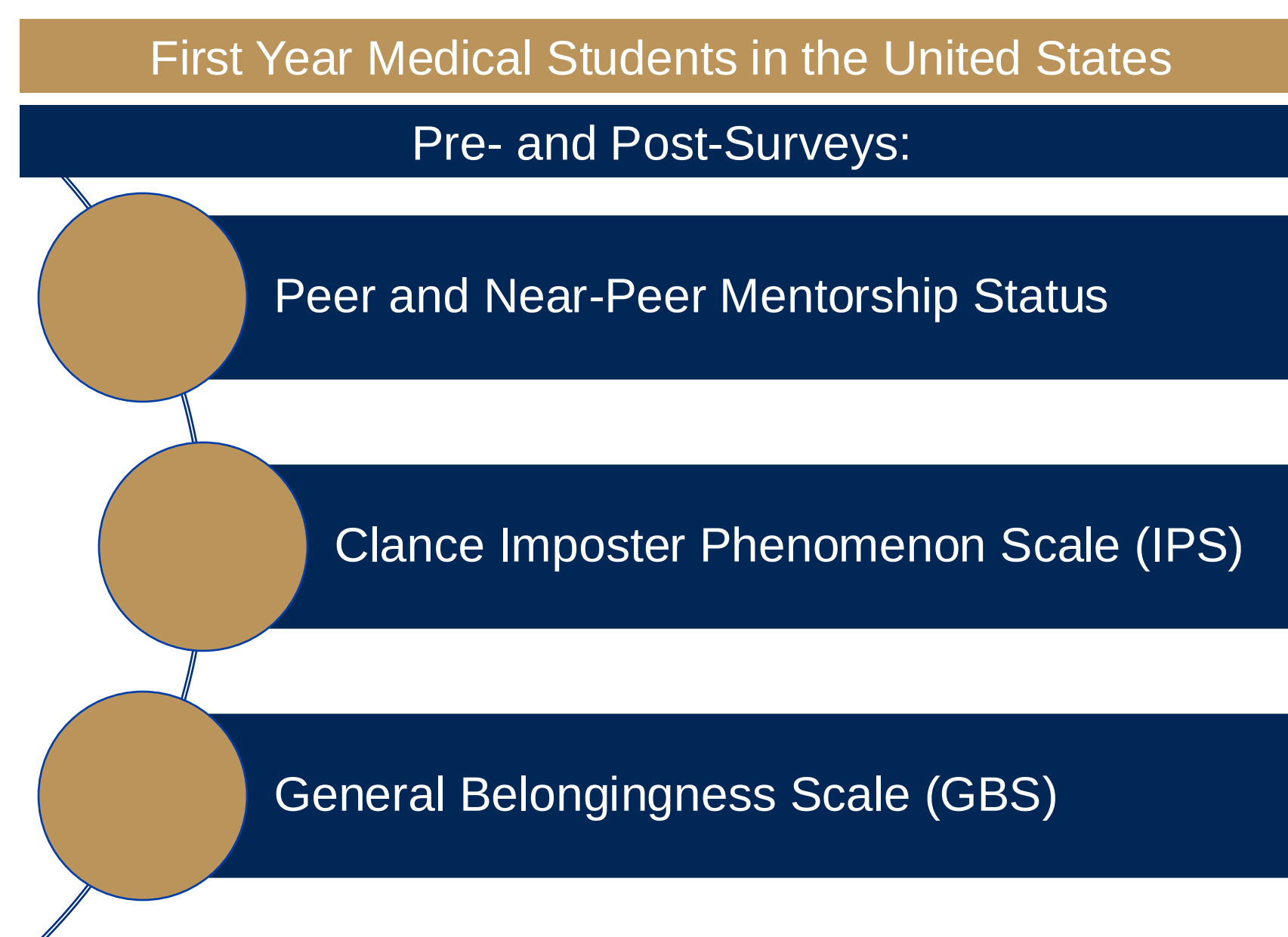


Figure 1. First year medical students were recruited to provide mentorship status and complete the IPS and GBS surveys via Qualtrics at the start and end of the academic year.

Results

Table 1. Demographics of Participants (n=8). Only participants who completed both the pre- and post-survey were included in this study.

Gender	
Cisgender Male	37.5%
Cisgender Female	62.5%
Race/Ethnicity	
White	62.5%
East Asian	25%
Non-White Hispanic/Latino	12.5%
First-generation	
Yes	37.5%
No	62.5%
Mentorship Status	
Mentor	37.5%
Mentor + Mentee	25%
Neither	37.5%

Table 2. Two-sample T test comparison of GBS Acceptance/Inclusion Subscale (A/I).

GBS A/I	Pre-survey	Post-survey
N	8	8
Mean (SD)	37.25 (3.62)	38.63 (2.92)
Difference	+1.38 (2.33)	
P-value	0.138	

Higher scores indicate increased feelings of acceptance and inclusion. Includes mentors and non-mentors.

Table 3. Two-sample T test comparison of GBS Rejection/Exclusion Subscale (R/E).

GBS R/E	Pre-survey	Post-survey
N	8	8
Mean (SD)	14.13 (8.24)	11.00 (5.73)
Difference	-3.13 (3.60)	
P-value	0.044	

Lower scores indicate decreased feelings of rejection and exclusion. Includes mentors and non-mentors.

Results (continued)

Table 4. Two-sample T test comparison of IPS. Higher scores indicate increased feelings of IP. Includes both mentors and non-mentors.

IPS Scores	Pre-survey	Post-survey
N	8	8
Mean (SD)	69.25 (19.72)	60.25 (14.26)
Difference	-9.00 (9.58)	
P-value	0.033	

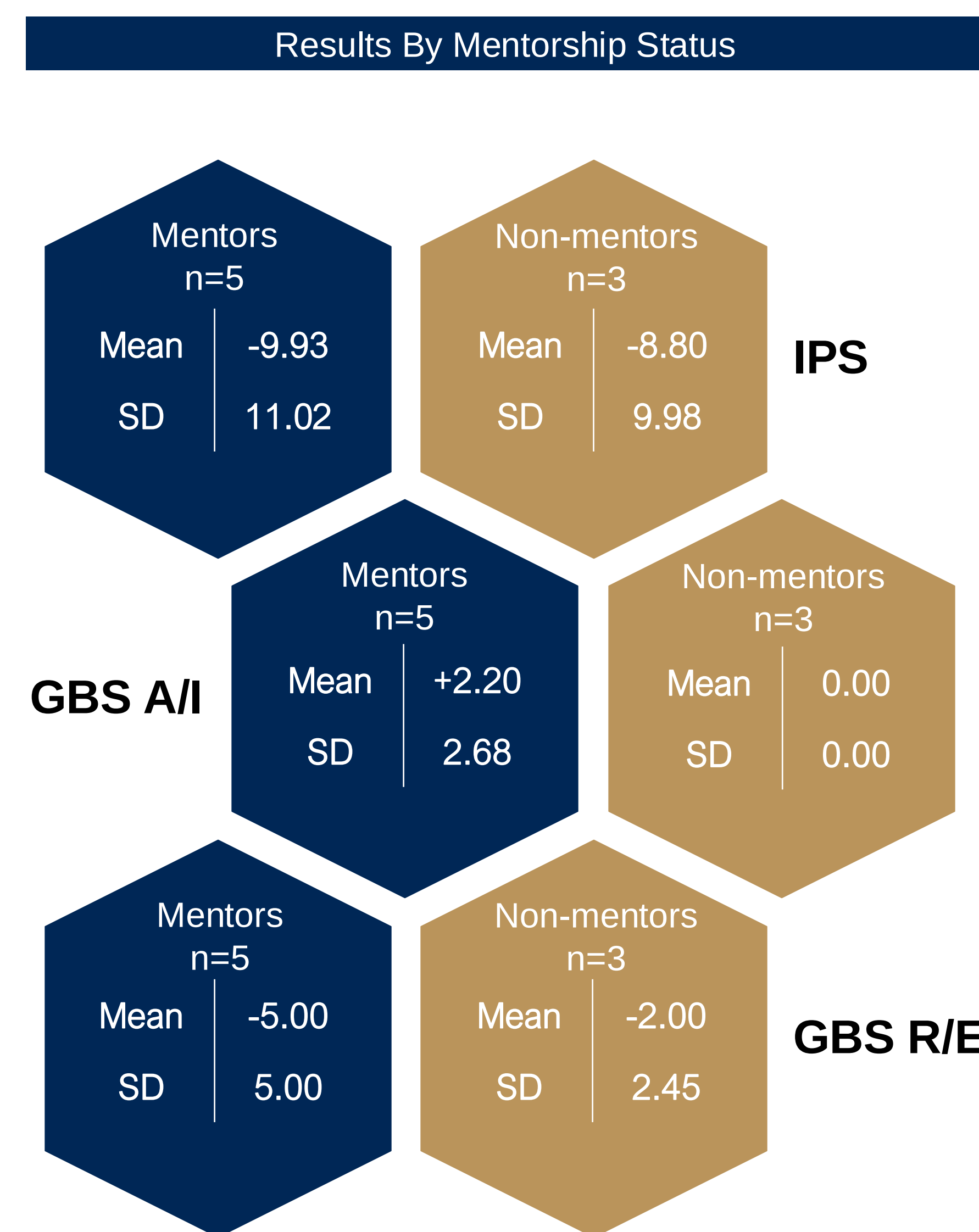


Figure 2. Comparison of differences in pre- and post-survey scores, grouped by mentorship status. Mentors include those who are solely mentors (n=3) and those who are both mentors and mentees (n=2). Both mentors and non-mentors had a decline in IPS scores (**p=0.9460**). Mentors had a positive change in GBS A/I scores, while non-mentors had no change (**p=0.2183**). Both mentors and non-mentors had decreases in GBS R/E scores (**p=0.2865**). No statistically significant change between mentors and non-mentors.

Conclusions

- First-year medical students exhibited a statistically significant decrease in IPS and GBS R/E scores over the academic year, indicating decreased IP.
- Mentors experienced a greater decline in IPS and GBS R/E scores and a larger increase in GBS A/E scores, though small sample size severely limits statistical power and further racial stratification.
- Similar research conducted by a previous student indicated mentorship was associated with a statistically significant decline in IP, which aligns with the findings of this study and supports existing literature.
- Further data collection may clarify mentorship's role as a cost-effective strategy to enhance the overall wellness of students throughout medical school.
- Future studies should evaluate peer and near-peer mentorship as a means to reduce attrition among historically underrepresented medical students and physicians.

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