

Introduction

- Imposter syndrome (IS) is characterized by chronic feelings of self-doubt as well as fear of being discovered as an intellectual fraud. Overall, those suffering from IS have a lower opinion of their own intelligence than others have of them and are unable to internalize their own accomplishments or skills.¹ This syndrome has been reported to have a high prevalence among medical student populations and has been found to be a predictor of psychological distress, such as depressive symptoms.
- Depression is a very common mental disorder across the United States, and is a common problem among medical students as well.² Its symptoms can include, among others, loss of interest in activities, fatigue, difficulty concentrating or remembering, and even suicide ideation.³ These can lead to poor performance in school as well as poor mental health.
- Despite adequate diagnostic tools and sufficient evidence of IS and depressive symptoms among medical students, there is somewhat little research in the field of IS, and almost none relating it with depressive symptoms within the medical education community. The object of this research was to gather data about the prevalence of IS within the medical student community and explore its relation to depressive symptoms.

Aims and Objectives

- Discover the prevalence of imposter syndrome (IS) among medical students, comparing prevalence among different demographic factors, including: age, sex, race, and current year in school.
- Record the prevalence of specific depressive symptoms among medical students, and stratify the symptoms by concurrent presence or absence of IS in the reporting student.
- Discover potential predictors among depressive symptoms for those who are also likely to concurrently suffer from IS.

Methods

A web-based survey was sent to all of the medical students at Oakland University William Beaumont School of Medicine (OUWB) including the following sections:

- Demographic information, including gender and year in school
- The Young Imposter Scale, an 8-question survey assessing for the presence of IS in the respondent, with 5 or more “Yes” answers considered to be a positive screen
- A modified PHQ-9 questionnaire to identify depressive symptoms in the respondent

All of the data collected was anonymous and self-reported.

Young Imposter Scale

1. Do you secretly worry that others will find out that you're not as bright and capable as they think you are?
2. Do you sometimes shy away from challenges because of a nagging self-doubt?
3. Do you tend to chalk your accomplishments up to being a “fluke,” “no big deal” or the fact that people just “like” you?
4. Do you hate making a mistake, being less than fully prepared, or not doing things perfectly?
5. Do you tend to feel crushed even by constructive criticism, seeing it as evidence of your “ineptness?”
6. When you succeed, do you think “Phew, I fooled them this time, but I may not be so lucky next time?”
7. Do you believe that other people (students, colleagues, competitors) are smarter and more capable than you?
8. Do you live in fear of being found out, discovered, or unmasked?

Modified PHQ-9*

Over the last 2 weeks, how often have you been bothered by any of the following problems? Please respond to each question with one of the following answers: “Not at all,” “Several days,” “More than half the days,” “Nearly every day.”

1. Little interest of pleasure in doing things
2. Feeling down, depressed, or hopeless
3. Trouble falling or staying asleep, or sleeping too much
4. Feeling tired or having little energy
5. Poor appetite or overeating
6. Feeling bad about yourself – or that you are a failure or have let yourself or your family down
7. Trouble concentrating on things, such as reading the newspaper or watching television
8. Moving or speaking so slowly that other people could have noticed. Or the opposite – being so fidgety or restless that you have been moving around a lot more than usual.

*The PHQ-9 was modified to not include the question regarding suicide ideation, as there was no identifying information collected and thus no way to follow up with those who reported suicidal thoughts.

Results

■ Imposter Syndrome ■ No Imposter Syndrome

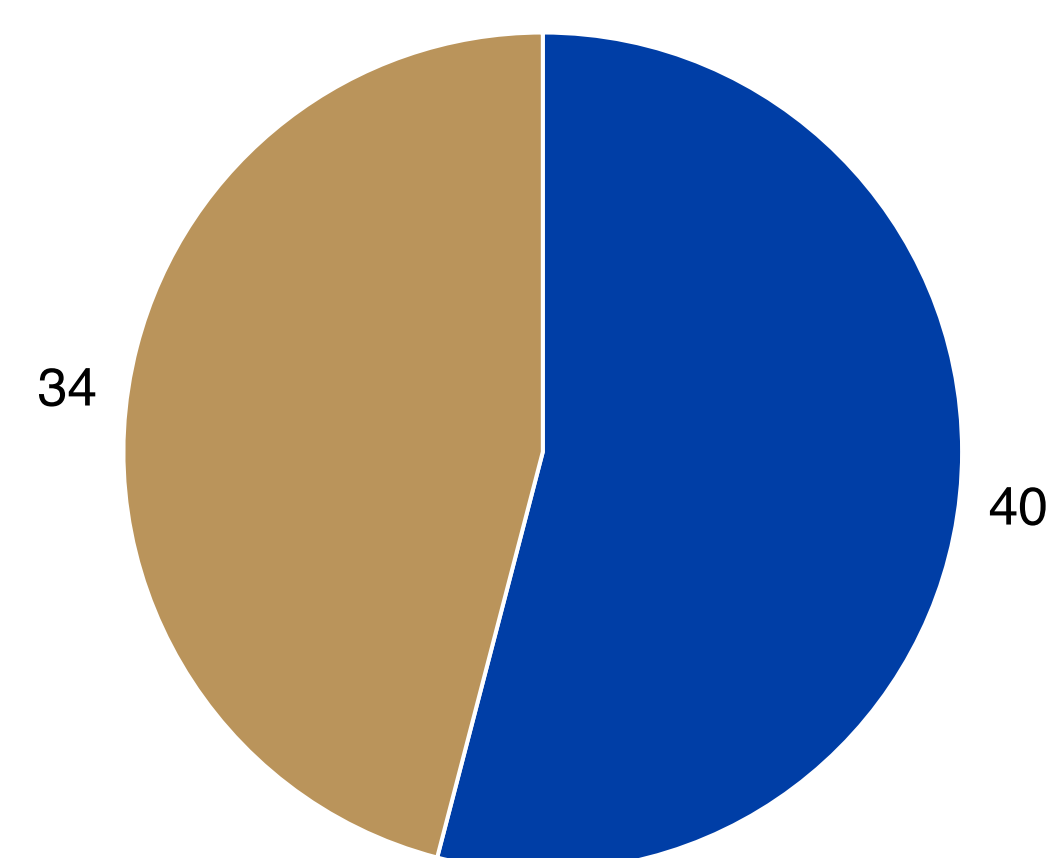


Fig. 1: A total of 74 individuals responded to the survey, with 54% screening positive for IS.

Table 1: Depressive Symptoms in respondents with and without IS

Depressive Symptom	Response	No IS	Yes IS	p-value
Little interest or pleasure in doing things?	Negative	31 (91%)	32 (80%)	0.208
	Positive	3 (9%)	8 (20%)	
Feeling down, depressed, or hopeless?	Negative	31 (91%)	30 (75%)	0.123
	Positive	3 (9%)	10 (25%)	
Trouble falling or staying asleep, or sleeping too much?	Negative	23 (68%)	25 (63%)	0.807
	Positive	11 (32%)	15 (38%)	
Feeling tired or having little energy?	Negative	17 (50%)	23 (58%)	0.641
	Positive	17 (50%)	17 (43%)	
Poor appetite or overeating?	Negative	29 (85%)	29 (73%)	0.259
	Positive	5 (15%)	11 (28%)	
Feeling bad about yourself - or that you are a failure or have let yourself or your family down?	Negative	30 (88%)	26 (65%)	0.029
	Positive	4 (12%)	14 (35%)	
Trouble concentrating on things, such as reading the newspaper or watching television?	Negative	28 (82%)	27 (68%)	0.186
	Positive	6 (18%)	13 (33%)	
Moving or speaking so slowly that other people could have noticed. Or the opposite . . . ?	Negative	32 (94%)	37 (93%)	1.000
	Positive	2 (6%)	3 (8%)	

- 74 students that responded to the survey with representation from each class. Out of these, 40 (54%) individuals screened positive for IS (Fig. 1).
- This data was then compared to the individuals’ responses to the screening for depressive symptoms by a Fishers Exact Test (Table 1). The only question from the PHQ-9 that was found to be correlated to the presence of IS was “Feeling bad about yourself – or that you are a failure or have let yourself or your family down” (p=0.029).
- A Fishers Exact Test was also performed comparing the presence of IS to gender as well as year in school, finding no significant correlations.

Conclusions

- The results show a moderately high prevalence of imposter syndrome (IS) among medical students. This is something that we find concerning, as IS can prevent medical students from internalizing their own accomplishments or skills.¹ In addition, has been shown by previous studies to be associated with other psychologic stressors, such as burnout and depressive symptoms.^{4,5} While there was only one depressive symptom found to be significantly correlated to IS (feeling bad about oneself, or a failure), this can still decrease medical student wellbeing.
- More research is certainly needed in this field, as there is much we do not know about IS, including the effects on an individual’s mental health, both short term and long term, as well as duration of symptoms and effective strategies to promote recovery. It is also still to be determined what other domains IS can effect in addition to mental health, such as impact on performance in medical school and beyond. Further studies are certainly needed in this domain as well.
- In conclusion, imposter syndrome has an effect on many individuals going through the rigors of medical school. The extend of this effect can and should be explored further through more studies that seek to find ways to support those impacted by IS.

References

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