

The Effect of Mentoring on Impostor Phenomenon

Monique Waltman¹, Kyeorda Kemp, Ph.D.²

¹Class of 2022 M.D. Candidate, Oakland University William Beaumont School of Medicine

²Department of Biomedical Foundations, Oakland University William Beaumont School of Medicine

Introduction

- Impostor Phenomenon (IP) was originally thought to only be applicable to high achieving women, but IP is now applies to both male and female achievers who are psychologically uncomfortable with acknowledging their role in their success.¹
- Research has also shown that impostor phenomenon is not uncommon for students when entering a new academic environment. This can lead to lower self-confidence and belief in their own abilities.³
- The need for addressing the detrimental effects of IP is particularly strong for future practicing physicians due to serious consequences, such as burnout.
- Studies that have focused on peer and near peer-mentoring in academia show that mentoring is beneficial to students in numerous ways including improving sense of self, enjoyment of their studies, and sense of belonging to their academic community.²
- Reducing IP may improve burnout rates.

Aims and Objectives

Assess whether students perceive a reduction in impostor phenomenon after they participate as mentors in a mentoring program.

Methods

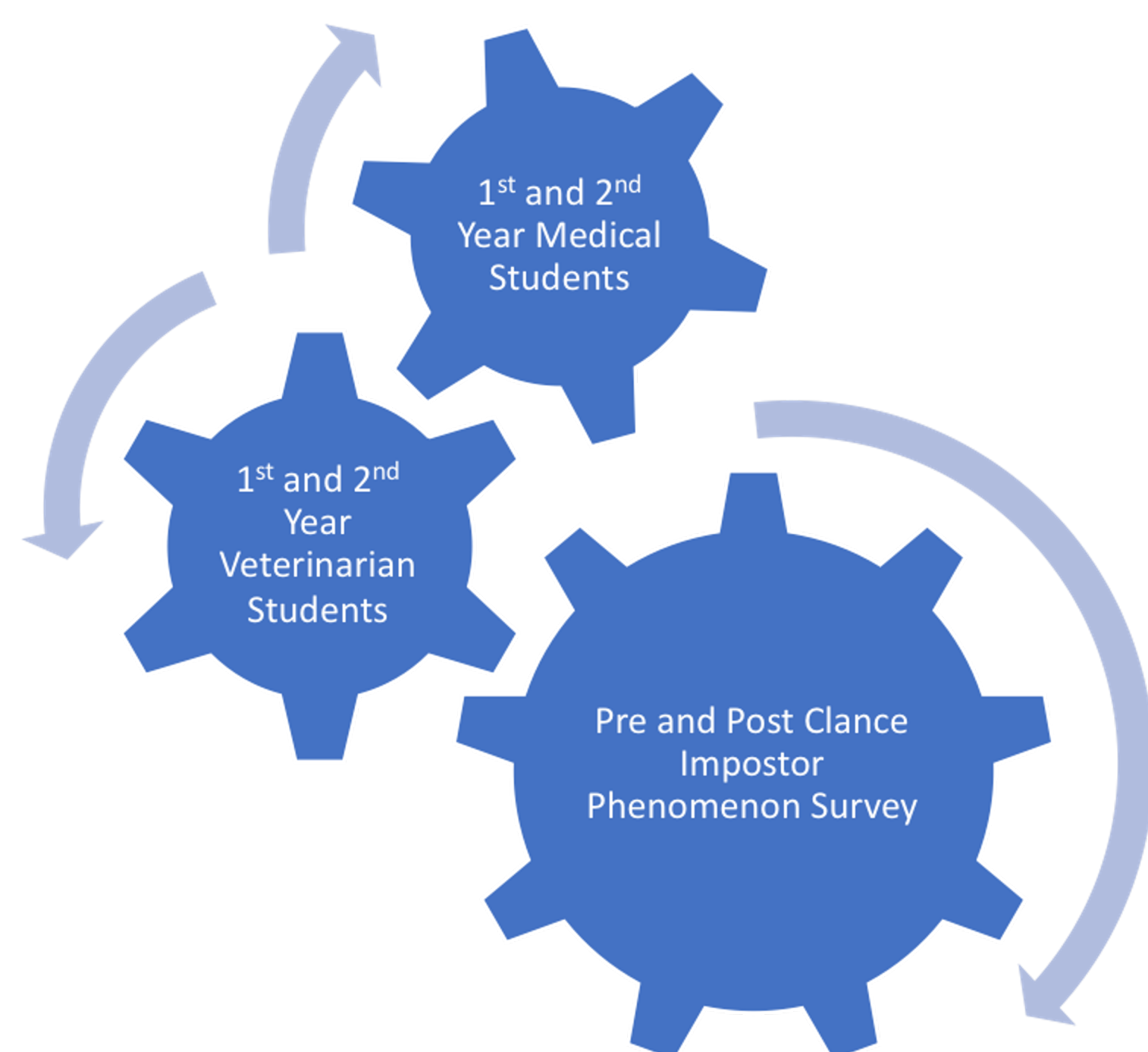


Figure 1: First and second year medical students from OUWB and Purdue Veterinary School were recruited to complete the Clance Impostor Phenomenon Survey. The survey was administered online via Qualtrics at the beginning and again at the end of the academic year. They were asked to indicate if they were engaged in a mentor program as a mentee or a mentor in addition.

Results

Table 1: Demographics of Participants

Gender		
Female		10
Male		12
Education		
Medical Student		30
Veterinarian Student		1
Mentor Status		
Mentor		7
Mentee		2
Both Mentor and Mentee		2

Inclusion criteria included OUWB first and second year medical students referred to as M1 and M2. Student mentors younger than 18 years old and non- OUWB and Purdue students were excluded from the study. The investigator was excluded from the data. Some participants declined to provide demographic data.

Table 2: Comparison of Pre-Survey and Post-Survey

Impostor Score	Pre-Survey	Post-Survey
N	31	28
Mean (SD)	55.710 (29.900)	29.000 (32.372)
Median	70.000	0.000
Range	0.000, 87.000	0.000, 84.000

The Pre-survey responses and post-survey responses were treated as independent groups and a two-sample T test was completed; $p=0.0017$. The survey respondents (N) included both the mentor and the mentees.

Results Continued

Significant associations were found with the following 5-point Likert like scale questions (very true OR sometimes):

I often worry about not succeeding with a project or examination, even though others around me have considerable confidence that I will do well
($p=0.037$, pre-14/31 yes; post- 6/28 yes)



When I've succeeded at something and received recognition for my accomplishments, I have doubts that I can keep repeating that success.
($p=0.037$, pre-10/31 yes; post- 7/28 yes)



Table 3: Results of Additional Post-Survey Questions

	% Agree	% Disagree	% Neither Agree or Disagree
This experience will benefit me in the future	80%	10%	10%
This experience motivated me in my academic program	70%	10%	20%
This experience increased my level of confidence	60%	0%	40%
I have consider quitting the mentorship program least once in the last 12 months	0%	80%	20%

Individuals were given the option of answering additional post-survey questions (N=11)

Conclusions

- There was a reduction in IP when comparing the pre and post-term responses. These findings indicated that there is a negative correlation between impostor feelings and mentorship.
- This is interesting because previous studies have found that IP was common in matriculating first-year medical students with a IP mean score of 63.0 ± 14.6 (moderate-to-frequent impostor feelings) and significantly increased at year's end.^{4,5}
- This observation may inform the development of interventions tailored to foster wellness as students negotiate the transition from the preclinical to clinical phases of their training.
- The act of mentoring may be a cost effective way to combat IP and burnout in future clinicians, which may lead to better patient experience and health outcomes.
- We plan to continue to partner with Purdue University College of Veterinary Medicine to track IP and mentoring among veterinary medicine students. We also plan to measure how IP changes in medical students that are not involved in a mentoring program changes overtime.

References

1. Clance PR, Imes SA. The impostor phenomenon in high achieving women: Dynamics and therapeutic intervention. *Psychother Theory, Res Pract.* 1978;15(3):241-247. doi:10.1037/h0086006
2. Allen TD, Lentz E, Day R. Career Success Outcomes Associated With Mentoring Others. *J Career Dev.* 2006;32(3):272-285. doi:10.1177/0894845305282942
3. Langford J, Clance PR. The impostor phenomenon: Recent research findings regarding dynamics, personality and family patterns and their implications for treatment. *Psychother Theory, Res Pract Train.* 1993;30(3):495-501. doi:10.1037/0033-3204.30.3.495
4. Levant, B., Villwock, J. A., & Manzardo, A. M. (2020). Impostorism in third-year medical students: an item analysis using the Clance impostor phenomenon scale. *Perspectives on medical education*, 9(2), 83–91. <https://doi.org/10.1007/s40037-020-00562-8>
5. Rosenthal S, Schluskel Y, Yaden MB, et al. Persistent Impostor Phenomenon Is Associated With Distress in Medical Students. *Fam Med.* 2021;53(2):118-122.

Images

<https://www.istockphoto.com/photo/3d-render-happy-doctor-african-cartoon-character-makes-presentation-clip-art-gm1330912857-414198706>

Acknowledgements

This poster was possible because of the work of Dr. Kemp, the OUWB community, Embark Co-Program and Course Directors, the OUWB Statisticians and Dr. Clance.