

Impostor syndrome in hospitalists- a cross-sectional study

Susmita Paladugu^a, Tom Wasser^b and Anthony Donato ^c

^aAssistant Professor of Medicine, Drexel University College of Medicine, Reading, PA, USA; ^bSenior Scientist, Statbiz, Macungie PA;

^cProfessor of Medicine, Drexel University College of Medicine

ABSTRACT

Impostor syndrome (IS) is a psychological phenomenon in which highly successful people are plagued with self-doubt. Its prevalence in hospitalists and effects of mentoring programs are unknown.

We surveyed 71 hospitalists at one hospital for symptoms of IS using the Clance Impostor Phenomenon Scale (CIPS). Mean CIPS score was 53.82 (± 17.1). Twenty-four participants (33.8%) had IP scores >60 , indicating impostor syndrome. There was no difference in score for men and women (56.70 versus 53.02, $p = 0.35$). Non-white hospitalists had lower rates of impostor syndrome compared to white hospitalists (25% versus 43%, $p = 0.002$). Impostors had no difference in years as a hospitalist compared to non-impostors (6.96 versus 6.62 years, $p = 0.81$). Hospitalists with mentors compared to those without had no difference in rates of impostor syndrome (40% versus 34.1%, $p = 0.88$).

The prevalence of impostor syndrome is similar in hospitalists to other professions. A voluntary mentoring program was not associated with lower prevalence.

ARTICLE HISTORY

Received 16 October 2020

Accepted 14 January 2021

KEYWORDS

Physicians/psychology; self-efficacy; self-assessment; mentoring/statistics and numerical data

1. Introduction

Impostor syndrome or phenomenon (IP) was defined by Clance et al. as a state of ‘intellectual phoniness’[1]. Persons with IS are plagued with intense feelings of self-doubt and do not share their thoughts freely for fear of being exposed as ‘fraud’ despite an absence of objective evidence of failure[1]. It is postulated that 70% of people at some point in their lives have impostor tendencies, especially during times of transition or when posed with new challenging tasks [2–4]. In people without IS, feelings of self-doubt abate over time or with sustained successes. However, persons with impostor syndrome continually sustain these feelings of fraudulence and self-doubt. They describe being afraid of taking on roles with high visibility, and often lack motivation to lead or plan their careers[5].

In the recent years, there has been renewed interest in impostor syndrome and its impact in health care professions. This condition has been described in medical students[6], internal medicine interns[7], family medicine residents[8], internal medicine residents[9], dental, pharmacy, nursing students, and clinical nurse specialists [10–12]. There are fewer objective data on the prevalence of IS in practicing physicians. IS has been reported in academic faculty across multiple specialties [13] and general surgeon faculty and residents[14]. Although it was initially thought to be more frequent in women, IS has been noted with similar frequency in men [15] but

more frequent in foreign medical graduates in Canada [9]. Proposed interventions to reduce IS include structured mentoring programs, group discussions, feedback sessions and discussion groups [1,2,10,16–19]. None of these proposed interventions have been formally evaluated except group therapy, which was qualitatively analyzed by Matthew and Clance [20,21].

The prevalence of Impostor syndrome in practicing hospitalists is not known, nor is the impact of mentoring programs on IS. We set out to fill this gap by surveying hospitalists at one institution across different stages of career, gender, and ethnicity.

2. Methods

2.1. Participants

Intended subjects in this study were the 84 practicing hospitalists at one academic independent medical center. All hospitalists are board eligible or certified in Internal Medicine and included both foreign medical graduates and graduates of US medical schools. The hospitalist group had created a mentoring program for all newly hired physicians 18 months before this survey, in which biweekly meetings between mentor and mentee were recommended in the 1st month followed by monthly for 2 months followed by quarterly until the program ended at 12 months. The goal of the program was to increase retention. Mentors were senior unpaid volunteers from the hospitalist group.

2.2. Data collection

Clance Impostor Phenomenon Scale (CIPS) was chosen to evaluate participants for Impostor syndrome [22]. The CIPS is a 20-item questionnaire with answers on a 5-point Likert scale ranging from 'not at all true' to 'very true'. Scores range from 20–100. There is no standard cutoff, but scores greater than 60 are accepted as moderate impostor tendencies and greater than 80 as severe impostor tendencies. For this study, we used a cutoff score of greater than 60 as representing presence of Impostor Syndrome. The CIPS has a high level of internal consistency with alpha of 0.96[23]. Study data were collected and managed using the REDCap electronic data capture tool[24].

Participants were unaware that they were filling questionnaire for IS. The survey was titled 'self-evaluation'. In addition to CIPS, the survey also included questions on gender, race, years since graduation, satisfaction with their mentoring relationships and time spent with their mentor. Survey participation was voluntary and completely anonymous. A drawing at the end of survey administration for a 100 USD gift card was given to improve response rate. We hypothesized that gender, ethnicity and having a mentor may impact impostor syndrome scores. We postulated that we would find an inverse relationship between IS scores and years of experience as well as time in job as a hospitalist.

Associations between presence or absence of moderate or greater IS and gender, race, time as a hospitalist, time with a mentor were performed with Chi-square testing, linear regression and analysis of variance as appropriate (SPSS version 25, Aramont, NY). The study was approved by the Tower Health IRB on 8 February 2020 (Protocol number: IRB 008–20).

3. Results

Of 84 hospitalists invited by e-mail, 71/84 (84.5%) surveys were completed. Demographic data is reported in Table 1. Thirty of the 71 respondents (42%) reported having a mentor. The mean CIPS score was 53.82 (± 17.1). Of the 71 participants, 24 had IS scores greater than 60, indicating a 33.8% prevalence of moderate or greater Impostor tendencies. There was no significant difference in the IS score for men (56.70 ± 14.5) as compared to women (53.02 ± 18.3 , $p = 0.35$). Thirteen of 20 (43.3%) hospitalists who identified themselves as white had IS scores >60 , compared to 13 of 51 (25.5%) who are non-white ($p = 0.002$). Those identified as impostors had no significant difference in number of years as a hospitalist when

Table 1. Demographic characteristics of participants and impostor syndrome score.

	N = 71	Impostor > 60 N = 26 (36.6%)	Not Impostor ≥ 60 N = 45 (63.3%)	p-value
Gender				$p = 0.353$
Male	42	(59.1%)	14 (53.8%)	28 (65.1%)
Female	27	(38.0%)	12 (46.2%)	15 (34.9%)
Other	2	(2.8%)	-	-
Race				$p = 0.061$
White	20	(28.2%)	13 (54.2%)	7 (21.9%)
African American	3	(4.2%)	0	3 (9.4%)
Asian	26	(36.6%)	8 (33.3%)	18 (56.3%)
Hispanic	3	(4.2%)	2 (8.3%)	1 (3.1%)
Middle East/North African	4	(5.6%)	1 (4.2%)	3 (9.4%)
Did not identify	15	(21.1%)	-	-
Years as Hospitalist				$p = 0.818$
Up to 5 years	40	(56.3%)	13 (50.0%)	27 (60.0%)
(1) years	17	(23.9%)	8 (30.8%)	9 (20.0%)
>10 years	14	(19.7%)	5 (19.2%)	9 (20.0%)
Career Mentors				$p = 0.880$
No mentors	41	(57.7%)	14 (53.8%)	27 (60%)
One mentor	20	(28.1%)	8 (30.8%)	12 (26.7%)
Two mentors	10	(14.1%)	4 (15.4%)	6 (13.3%)

compared to non-impostors (6.96 versus 6.62 years, $p = 0.81$). Hospitalists with mentors as compared to those without mentors had no statistical difference in raw impostor scores (50.2 versus 53.0, $p = 0.59$) or prevalence of impostor syndrome (40% versus 34.1%, $p = 0.88$) No statistical relationship was seen between IS score and time spent with mentors ($p = 0.19$). The relationship between impostor syndrome and mentor likeability could not be calculated due to small and unequal sample sizes.

4. DISCUSSION

We found a prevalence of impostor syndrome to be 34% among one group of hospitalists, with similar rates among males and females, which was unaffected by years of experience or exposure to mentors. This IS rate was higher than those reported in family medicine residents (33%)[8], dental, pharmacy, nursing students (30%)[12], general surgery faculty (7.8%) [14] but lower than those in a study of surgical residents (43%)[14] and internal medicine residents (44%)[9].

Our similar rates between the sexes is congruent with prior studies[15]. We noted lower rates of IS in non-white physicians than white physicians (25% versus 43%), which is discordant from a prior small sample in Canada where 88% of their 7 non-white residents reported IS symptoms, as compared to 35% of white physicians[9]. Our results also differ from other published works in which minority populations report higher levels of impostorism [25,26].

Impostor syndrome is not a clinical diagnosis. Whether it is a personality trait or transient state is still debated. Group therapy to discuss one's fears and validate feelings of IS was evaluated by Clance et al. Tools to promote self-awareness, self-confidence and critical reflection of work based experiences were all proposed as possible interventions [10,17]. None of these interventions were formally evaluated.

Mentoring as possible intervention to alleviate symptoms of IS have been suggested by several authors [2,5,18,19]. We did not find any significant correlation between impostor syndrome and mentoring relationships, time spent with mentors or satisfaction with mentor relationships and IS scores. Given that our mentoring program was voluntary and that we could not assess the quality or degree of engagement with the mentoring program, it is entirely possible that mentoring programs could indeed have a more positive association on IS than we demonstrated.

Strengths of this study include our relatively large sample size and high response rates that confirm similar rates of IS to other medical professionals. Our associations with mentoring were limited by the voluntary nature of the mentoring program and a paucity of data on the program's engagement and quality, so more study is needed to determine the impact of mentoring on IS.

5. Conclusion

Impostor syndrome has been associated with burnout[27], anxiety, depression and psychological distress[12]. Impostor Syndrome is a trait associated with perfectionism, overpreparation, low self-esteem, lack of career planning and low conscientiousness[28]. Whether Impostor Syndrome is a fixed trait in individuals, deeply rooted in personality, or a state that is temporary that can be allayed by mentors, group discussions or counseling, is still currently debated[29]. Next steps for both IS and burnout research are high-quality evaluations of interventions and their impacts on IS scores, so resources can be directed toward meaningful interventions in the future.

Disclosure statement

No potential conflict of interest was reported by the authors.

ORCID

Anthony Donato  <http://orcid.org/0000-0002-8294-6769>

References

- [1] Clance PR, Imes SA. The imposter phenomenon in high achieving women: dynamics and therapeutic intervention. *Psychotherapy*. 1978;15(3):241–247.
- [2] Chandra S, Huebert CA, Crowley E, et al. Impostor syndrome: could it be holding you or your mentees back? *Chest*. 2019;156(1):26–32.
- [3] Lane JA. The imposter phenomenon among emerging adults transitioning into professional life: developing a grounded theory. *Adultspan J*. 2015;14(2):114–128.
- [4] Sakulku J. The impostor phenomenon. *J Behav Sci*. 2011;6(1):75–97.
- [5] Neureiter M, Traut-Mattausch E. An inner barrier to career development: preconditions of the impostor phenomenon and consequences for career development. *Front Psychol*. 2016;7:48.
- [6] Houseknecht VE, Roman B, Stolfi A, et al. A longitudinal assessment of professional identity, wellness, imposter phenomenon, and calling to medicine among medical students. *Med Sci Educator*. 2019;29(2):493–497.
- [7] Ramsey JL, Spencer AL. Interns and imposter syndrome: proactively addressing resilience. *Med Educ*. 2019;53(5):504–505.
- [8] Oriel K, Plane MB, Mundt M. Family medicine residents and the impostor phenomenon. *Family Medicine-kansas City-*. 2004;36(4):248–252.
- [9] Legassie J, Zibrowski EM, Goldszmidt MA. Measuring resident well-being: impostorism and burnout syndrome in residency. *J Gen Intern Med*. 2008;23(7):1090–1094.
- [10] Haney TS, Birkholz L, Rutledge C. A workshop for addressing the impact of the imposter syndrome on clinical nurse specialists. *Clinic Nurs Special*. 2018;32(4):189–194.
- [11] Mattie C, Gietzen J, Davis S, et al. The imposter phenomenon: self-assessment and competency to perform as a physician assistant in the USA. *J Phys Assist Educ*. 2008;19(1):5–12.
- [12] Henning K, Ey S, Shaw D. Perfectionism, the impostor phenomenon and psychological adjustment in medical, dental, nursing and pharmacy students. *Med Educ*. 1998;32(5):456–464.
- [13] LaDonna KA, Ginsburg S, Watling C. "Rising to the Level of Your Incompetence": what physicians' self-assessment of their performance reveals about the imposter syndrome in medicine. *Acad Med*. 2018;93(5):763–768.
- [14] Leach PK, Nygaard RM, Chipman JG, et al. Impostor phenomenon and burnout in general surgeons and general surgery residents. *J Surg Educ*. 2019;76(1):99–106.
- [15] Langford J, Clance PR. The imposter phenomenon: recent research findings regarding dynamics, personality and family patterns and their implications for treatment. *Psychotherapy*. 1993;30(3):495.

- [16] Armstrong MJ, Shulman LM. Tackling the imposter phenomenon to advance women in neurology. *Neurol Clin Pract*. 2019;9(2):155–159.
- [17] Gallagher SR. Professional identity and imposter syndrome. *Clin Teach*. 2019;16(4):426–427.
- [18] Johnson WB, Smith DG. Mentoring someone with imposter syndrome. *Harv Bus Rev Digital Articles*. 2019;2-4.
- [19] Mullangi S, Jagsi R. Imposter syndrome: treat the cause, not the symptom. *Jama*. 2019;322(5):403–404.
- [20] Bravata, D. M., Watts, S. A., Keefer, A. L., Madhusudhan, D. K., Taylor, K. T., Clark, D. M., ... & Hagg, H. K. (2020). Prevalence, Predictors, and Treatment of Impostor Syndrome: a Systematic Review. *Journal of General Internal Medicine*, 35(4), 1252-1275.
- [21] Matthews G, Clance PR. Treatment of the impostor phenomenon in psychotherapy clients. *Psychother Privat Pract*. 1985;3(1):71–81.
- [22] Mak KK, Kleitman S, Abbott MJ. Impostor phenomenon measurement scales: a systematic review. *Front Psychol*. 2019;10. DOI:10.3389/fpsyg.2019.00671
- [23] Holmes SW, Kertay L, Adamson LB, et al. Measuring the impostor phenomenon: A comparison of Clance's IP scale and Harvey's IP scale. *J Pers Assess*. 1993;60(1):48–59.
- [24] Harris PA, Taylor R, Thielke R, et al. Research electronic data capture (REDCap)—a metadata-driven methodology and workflow process for providing translational research informatics support. *J Biomed Inform*. 2009;42(2):377–381.
- [25] Bernard DL, Hoggard LS, Neblett JEW. Racial discrimination, racial identity, and impostor phenomenon: A profile approach. *Cult Div Ethnic Minorit Psychol*. 2018;24(1):51.
- [26] Ewing KM, Richardson TQ, James-Myers L, et al. The relationship between racial identity attitudes, worldview, and African American graduate students' experience of the imposter phenomenon. *J Black Psychol*. 1996;22(1):53–66.
- [27] Villwock JA, Sobin LB, Koester LA, et al. Impostor syndrome and burnout among American medical students: a pilot study. *Int J Med Educ*. 2016;7:364.
- [28] Bernard NS, Dollinger SJ, Ramanih NV. Applying the big five personality factors to the impostor phenomenon. *J Pers Assess*. 2002;78(2):321–333.
- [29] Fujie R. Development of the state impostor phenomenon scale. *Japanese Psychol Res*. 2010;52(1):1–11.