Addition of Imposter Syndrome Workshop to Pharmacy Student and Post-Doc Curriculum?

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BACKGROUND

- Within the past decade, there has been increased awareness surrounding pharmacy trainees' mental health.[1]
- Imposter syndrome, commonly seen in high-achieving individuals, involves a feeling of persistent self-doubt despite external evidence of competence.[2]
- This psychological experience often impacts pharmacists who routinely make high-stakes decisions, leading them to attribute a significant amount of self-worth to their professional contributions.[2]
- This level of distress can progress to serious negative outcomes including decreased physical health, decreased academic and/or professional performance, and suicide.[3]
- Strategies like workshops aimed at mitigating the prevalence of impostor syndrome remain underexplored in literature.

OBJECTIVES

- Identify the prevalence of imposter syndrome among Western University of Health Sciences College of Pharmacy pharmacy students and PGY-1 post-docs with the intent to reduce negative self-perceptions and provide strategies to overcome this syndrome.
- Identify characteristics of students and residents having imposter syndrome
- Analyze the impact of a workshop to address imposter syndrome in students and residents.

METHODS

Pre-survey administered to 3rd and 4th year pharmacy students and pharmacy residents/fellows.

Baseline characteristics of student performance GPA, leadership, failed courses, social support) and self-perception of imposter syndrome gathered.

Two-hour imposter syndrome workshop administered to students and residents.

The workshop defined imposter syndrome, described the prevalence of its occurrence and introduced mindful practices. Empowered students to utilize tools such as overcoming perfectionism, growth mindset and leveraging strengths. Participants practiced tools that can be used to overcome feelings of imposter syndrome in the future.

Post-survey re-assessed self-perception and confidence in utilizing workshop strategies after the workshop.

Feedback was collected from participants post-workshop. Descriptive statistics were used for demographics and survey responses. Categorical variables were compared using Chi-squared analysis using SPSS v28.

RESULTS

Table 1. Demographics of included survey respondents

Demographics		Correlation	
	Pre workshop survey N=171 (%)	Imposter Syndrome (Pre-Workshop) N=171 (%)	
Type of Trainee		N/A	
P3	88 (51%)		
AE	68 (40%)		
Post-Doc	15 (9%)		
GPA			P=0.390
≤2.3	3 (2%)	3/3 (100%)	
2.3-2.6	23 (13%)	16/23 (70%)	
2.7-2.9	38 (22%)	21/38 (55%)	
3.0-3.3	51 (30%)	37/51 (73%)	
3.4-3.7	26 (15%)	17/26 (65%)	
≥3.7	30 (18%)	22/30 (73%)	
Total	171 (100%)	116/171 (68%)	
# of Leadership Positions			P=0.177
0	43 (25%)	27/43 (63%)	
1	48 (28%)	29/48 (60%)	
2	48 (28%)	35/48 (73%)	
3	14 (8%)	13/14 (93%)	
4+	18 (11%)	12/18 (67%)	
Total	171 (100%)	116/171 (68%)	
Student Org			P=0.615
Rho Chi	26 (15%)	16/26 (62%)	
PLS	14 (8%)	8/14 (57%)	
Both	5 (3%)	3/5 (60%)	
Neither	126 (74%)	89/126 (71%)	
Total	171 (100%)	116/171 (68%)	

Demographics		Correlation	
	Pre-workshop survey N=171 (%)	Imposter Syndrome (Pre-Workshop) N=171 (%)	
Remediations			P=0.780
0	127 (74%)	86/127 (68%)	
1	16 (9%)	11/16 (69%)	
2	17 (10%)	10/17 (59%)	
3	7 (4%)	6/7 (86%)	
>3	4 (2%)	3/4 (75%)	
Total	171 (100%)	116/171 (68%)	
Academic probation			P=0.488
Yes	41 (24%)	30/41 (73%)	
No	130 (76%)	86/130 (66%)	
Total	171 (100%)	116/171 (68%)	
Social Support			P=0.602
1 Weak	10 (6%)	8/10 (80%)	
2	15 (9%)	11/15 (73%)	
3	36 (21%)	21/36 (58%)	
4	56 (33%)	40/56 (71%)	
5 Strong	54 (31%)	36/54 (67%)	
Total	171 (100%)	116/171 (68%)	

P3=pre-APPE 3rd year pharmacy student
AE= pre-graduation Advanced Elective 16-week APPE advanced rotation
Post-Doc= Post Graduate Year 1 Pharmacy Residents and Fellows half-way through program
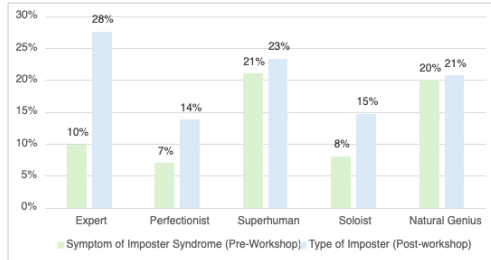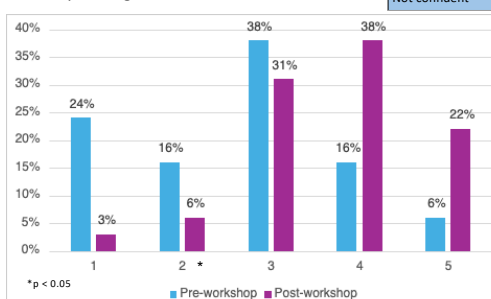
Figure 1. The impact of an imposter syndrome workshop on trainees existing knowledge and presence of imposter syndrome

Pre-Workshop Survey Respondents (N = 171)
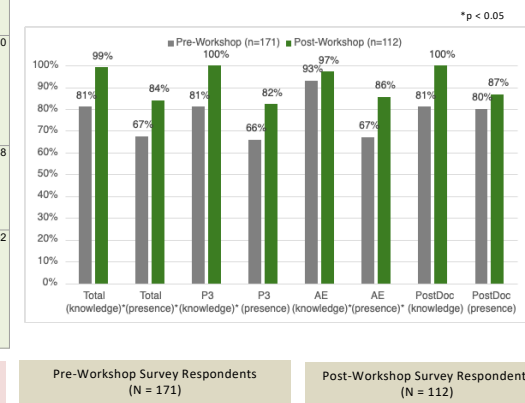
Post-Workshop Survey Respondents (N = 112)

Figure 2. Type of imposter syndrome reported pre and post workshop

Figure 3. Tools to be used to overcome imposter syndrome post workshop

Figure 4. Confidence in Understanding of Top 5 Gallup Strengths

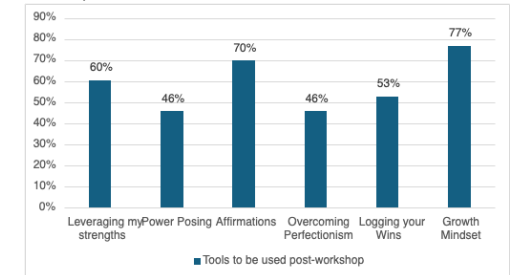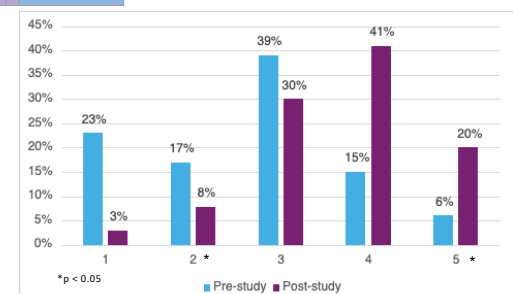**Figure 5.** Confidence in Utilizing Top 5 Gallup Strengths

DISCUSSION

- Majority of pre-APPE P3s, post-APPE P4s, and post-doctoral trainees all reported imposter syndrome. An imposter syndrome workshop educating trainees increased trainees' knowledge of the syndrome while also alerting them that they did have the syndrome.
- Without awareness, it is difficult to implement coping strategies. However, the imposter syndrome workshop taught trainees not just what imposter syndrome was but also tools on overcoming the syndrome. Respondents identified strategies taught in the workshop that would be useful for future practices of overcoming imposter syndrome. These tools will likely increase trainees' resilience as they continue their careers.
- Imposter syndrome was not statistically significantly more common among pharmacy trainees based on their number or type of leadership positions, GPA, or number of failed courses, showing that these groups may not have more imposter syndrome, and imposter syndrome may affect trainees regardless of performance, leadership and support
- The imposter syndrome workshop increased trainees' confidence in understanding (mean increase of 2.6→3.7 on scale of 1-4) and utilizing (mean increase of 2.7→3.7) their Gallup CliftonStrengths
- When asked how confident they feel in overcoming imposter syndrome post-workshop on a scale of 1-5 (1 =not confident and 5 = very confident), 70% reported confidence levels of 4 or higher, with an overall median of 4/5 confidence.
- A large majority (92%) of respondents stated that this workshop would be helpful for future trainees. 100% of trainees responded that this workshop should be added as part of the curriculum in future noting that earlier implementation of the workshop might be more helpful.

CONCLUSIONS

- This study demonstrates that the prevalence of imposter syndrome is high among trainees within the pharmacy profession. The implementation of an imposter syndrome workshop allows for increased awareness of this syndrome and provides strategies on how to overcome it. Feedback from respondents reinforced the need and utility for this workshop and advocated for earlier introduction of this professional development activity in pharmacy school curricula. Additional studies tying increased knowledge and tools of imposter syndrome to resilience are warranted.

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Authors have no conflicts of interest to disclose.