The Imposter Syndrome in Surgical Residents
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Abstract
Imposter syndrome (IS) is an internal sensation of intellectual phoniness in persons who feel fraudulence and worthlessness. The purpose of this study was to assess the prevalence of imposter syndrome among surgical residents. A web-based survey was conducted among all surgical residents of PGMI, Khyber Pakhtunkhwa, Pakistan, from May 1, 2022 to May 30, 2022. Of the 156 respondents, 104 (66.7%) were males and 52 (33.3%) were females. Moderate imposterism was seen in 81 (51.9%) of the respondents and 57 (36.5%) respondents reported severe or intense imposterism. Among postgraduate residents, no significant differences in Clance Imposter Phenomenon Scale score by year was noted (p = 0.291). Imposter syndrome was highly prevalent among surgical residents, i.e. 138 (88.5%) falling in the range of either moderate, severe, or intense imposterism. Among female residents, no significant differences in Clance Imposter Phenomenon Scale score by year was noted (p = 0.291). Imposter syndrome was highly prevalent among surgical residents, i.e. 138 (88.5%) falling in the range of either moderate, severe, or intense imposterism. Prevalence was more among female residents as compared to male residents. Year of training didn’t have any impact on the grades of imposterism.

Keywords: Imposter syndrome, Imposterism, Prevalence.
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Introduction
Outstanding academic or professional achievement is not enough to overcome imposter syndrome, which is described as "an internal sensation of intellectual phoniness in persons who feel fraudulence and worthlessness".

Subject and Methods
Demographic and Clance Imposter Scale Questionnaire 5 web-based study was conducted among all surgical residents of Postgraduate Medical Institute (PGMI), Khyber Pakhtunkhwa, Pakistan, from May 1, 2022 to May 30, 2022. Out of 350 surgical residents, 160 responded; four surgical residents did not meet the inclusion criteria and were excluded from the study. Sampling technique was convenient nonprobability type. Sample size of 156 was calculated by using WHO calculator keeping in view the current population of surgical residents approximately up to 350 in KP and prevalence of 76% moderate to intense imposterism in surgical residents (p=0.05±σ). After obtaining informed consent all the residents were briefly introduced to the study and were asked to complete the anonymous self-administered online Google forms questionnaire. Clance Imposter Scale (CIPS) was used to assess the prevalence and degree of severity of imposterism.
The Inclusion Criteria were Postgraduate residents of all surgical specialties and years in current residency programme of PGMI across KP province with no history of previously diagnosed earlier or recently with psychological disorders. The Exclusion Criteria were Residents diagnosed earlier or currently having psychological problems.

Data Analysis: All statistical calculations were performed using SPSS Version 23 software. Data was automatically collected by the internet-based survey (Google Forms) which were imported into SPSS for analysis.

Results

Of the 156 respondents included in the study, 104 (66.7%) were males and 52 (33.3%) were females Table 2. The mean CIPS score among all residents was 55.51 (range 27 to 87) which falls into moderate imposterism. Eighteen (11.5%) residents obtained a score between 0 and 40 (none to mild imposterism). Moderate imposterism (CIPS score 41 to 60) was seen in 81 (51.9%) respondents and 57 (none to mild imposterism). Moderate imposterism (CIPS score 41 to 60) was seen in 81 (51.9%) respondents and 57 (36.5%) respondents reported severe (CIPS score 61 to 80) or intense (CIPS score 81 to 100) imposterism (Figure 1).

![Figure: Severity of Imposter syndrome among all residents.](image)

Table-1: Analysis of Imposter syndrome score.

<table>
<thead>
<tr>
<th>Category</th>
<th>N (%)</th>
<th>Mean Score±SD</th>
<th>p value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Gender</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>104 (67.7)</td>
<td>53.79±11.764</td>
<td>0.012</td>
</tr>
<tr>
<td>Female</td>
<td>52 (33.3)</td>
<td>58.94±12.129</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>156 (100)</td>
<td>55.51</td>
<td></td>
</tr>
<tr>
<td><strong>Postgraduate year</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PGY-1</td>
<td>51 (32.7)</td>
<td>56.78±12.511</td>
<td>0.291</td>
</tr>
<tr>
<td>PGY-2</td>
<td>60 (38.5)</td>
<td>55.40±12.771</td>
<td></td>
</tr>
<tr>
<td>PGY-3</td>
<td>33 (21.2)</td>
<td>55.30±10.221</td>
<td></td>
</tr>
<tr>
<td>PGY-4</td>
<td>11 (7.1)</td>
<td>50.64±12.404</td>
<td></td>
</tr>
<tr>
<td>PGY-5</td>
<td>1 (0.6)</td>
<td>57</td>
<td></td>
</tr>
</tbody>
</table>

The mean CIPS score among males was 53.79±11.764 compared to females which was 58.94±12.129 (p =0.012) both falling in the range of moderate imposter syndrome. Out of 156 respondents, 51 (32.7%), 60 (38.5%), 33 (21.2), 11 (7.1%) and 1 (0.6%) were from first, second, third, fourth, and fifth year, respectively. First year residents had a mean score of 55 compared to the score 50 of PGY-4, both of which fall under the category of moderate imposterism (Table 2).

Discussion

Imposter syndrome, also known as Imposter phenomenon, is nothing new, but it has recently received increasing attention from researchers because of the persistent negative effects it has on victims as well as departments, organisations, and society as a whole. The victims are competent but secretly worry about their presumed lack of knowledge and skills and eventually this becoming known to others.9

Among general surgery residents, imposter syndrome is not only common but also severe. Only 2.1 percent of the study participants indicated that they did not experience mild imposterism, according to the trademark study to date on this topic, which also noted that the prevalence of moderate to major and extreme imposterism was 97.9 percent.5 In our study the prevalence of moderate to significant, and intense imposterism was 88.5% and mild to none was 11.5%.

Additionally, female residents scored higher on the impostor scale, a finding that is comparable with previous research results.10, 11 Similar findings were reported in our study where females had increased odds of suffering from imposter syndrome compared to males.

Our study is subjected to a few limitations worth noting. First, the potential non-response bias due to the use of an online survey method. Secondly, the comparison

![Table-2: Severity of Impostorism based on Gender.](image)
between different groups of specialties was not done. Third, sample was nonprobability convenient and Fourth, as the study was self-reporting, there could be a bias of acknowledging psychiatric illness.

Despite limitations, the study provides a preliminary look at the frequency and severity of impostor syndrome among the surgical residents of KP. It introduces a new chapter to explore the risk factors of impostor syndrome and its negative effect on the performance of surgical residents and patients. Keeping in view the effects of this phenomenon which is already mentioned in previous literature, strategies need to be devised in institutions and at the national level to overcome the degree of imposterism among residents. This will help the students to recognize and utilize their skills which will have a positive influence on their health and lead to improvement in the quality of care in hospitals.

**Conclusion**

The study concluded that impostor syndrome was highly prevalent among surgical residents. Moderate, severe, or intense imposterism was prevalent in 138(88.5%) students. Female residents were more affected than male residents. The year of training did not have any impact on the grade of imposterism.

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**References**


