

## Difference in the Characteristics of Imposter Syndrome in Dental Students of Preclinical and Clinical Phase

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### ABSTRACT

**Background:** People suffering from imposter syndrome despite being competent consider themselves less skillful and incapable. Such individuals are also more prone to regret their choice of career with consequent early drop out, experience burnout, more prone to medical errors, absenteeism and low job satisfaction. The current study aims to determine the difference in the characteristics of imposter syndrome in dental students of preclinical and clinical phase and its gender predisposition.

### Objectives:

1. To find out the frequency and characteristics of imposter syndrome among dental students. 2. To evaluate the differences in the characteristics of imposter syndrome among dental students of preclinical and clinical year. 3. To determine gender predisposition of imposter syndrome among dental students.

**Materials & Methods:** The cross-sectional study was conducted on 138 dental students of CMH Lahore Medical College and Institute of Dentistry, Lahore. A validated questionnaire (Clance IP Scale) containing 20 items with 5-point Likert scale was used to collect data by convenient sampling technique. The characteristics of IP were determined by adding the scores of all items. Descriptive statistics were done, chi-square applied, p-value <0.05 was considered significant.

**Results:** One hundred and thirty-eight students filled the IP Scale. The frequency of imposter syndrome is found to be 52.1% among Dental Students. Majority (72) of the dental students have frequent to intense imposter feelings. There is non-significant difference in the IP characteristics of male and female students. No significant difference in the characteristics of imposter syndrome is found between dental students of preclinical and clinical year.

**Conclusion:** There frequency of imposter syndrome is high among Dental students. Non-significant difference in the IP characteristics is found between male and female students as well as students of preclinical and clinical year.

**Key Words:** Imposter syndrome, dental students, characteristics, preclinical phase, clinical phase.

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### INTRODUCTION

Imposter syndrome is a condition in which people mistrust their capabilities and accomplishments even though they have sufficient evidence of their abilities, competencies and success<sup>1</sup>. These individuals fear that they will one day be exposed as an incompetent person. They believe that whatever they have achieved in their life is a result of sheer

luck<sup>2</sup>. The psychological researchers Pauline Clance and Suzanne were the first one to discover it among high achiever females in 1978<sup>3</sup>. Initially it was found in successful women but later Clance identified this syndrome in both gender and among other highly accomplished people<sup>4,5</sup>. Imposter syndrome is prevalent in both the genders however the intensity varies among males and females<sup>6</sup>. The psychological characteristics of this syndrome include anxiety, neuroticism, perfectionism, lower self-discipline, resilience, perceived competence and conscientiousness. It manifests in specific scenarios as an evoked affective response<sup>5,8</sup>.

In dental students, imposter syndrome is found to be present in one half of the females and one-fourth of the males<sup>5</sup>. The intensity of this syndrome varies with the point in time of training. Early phase of clinical training or shifting times are the phases when the symptoms of imposter syndrome are more likely to occur<sup>9</sup>.

The time at which dental students move from theory-based learning to the clinical training are of particular importance. The frequency of occurrence of symptoms has a negative effect on the mental health and well-being of the dental student<sup>5,10</sup>. The individuals with frequent symptoms and higher level of psychological distress manifest anxiety, depression, suicidal tendency and thoughts of quitting dental school and dropping out. The aggravating factors include high academic pressure, no emotional support, unattainable expectations and financial problems<sup>10</sup>.

Imposter syndrome can lead to burn out which can act as a barrier during identity formation and this can lead to poor patient care in the future. Hence, it is of utmost importance to direct efforts towards promotion of mental well-being of dental students.

The objectives of present study were to find out the frequency and characteristics of imposter syndrome among dental students, evaluate the difference in the characteristics of imposter

syndrome among dental students of preclinical and clinical years, and determine the gender predisposition of IP characteristics among dental students.

## MATERIALS AND METHODS

A cross-sectional study was conducted from August to November 2020 at CMH Lahore Medical College and Institute of Dentistry, after taking approval from the institutional review board. Informed consent was taken from the participants and convenient sampling technique was used to collect data from 138 dental students. A complete history was obtained from the participants to rule out any systemic or psychiatric illness because these can affect the characteristics and severity of imposter syndrome. Participants who gave history of chronic medical illnesses or were taking any medicines or sessions from psychiatrist or psychologist were excluded from the study.

Clance Imposter Phenomenon Scale (CIPS) a validated questionnaire was used to collect data. CIPS is a 20-item questionnaire with 5-point Likert scale showing degree of severity of imposter

**Table 1: Clance IP Scoring Chart used to Determine the Characteristics of Imposter Syndrome**

Sr. #	Score	Characteristics of IP
1	<40	Few IP Characteristics
2	40-60	Moderate IP Experience
3	61-80	Frequent IP Experience
4	> 80	Intense IP Experience

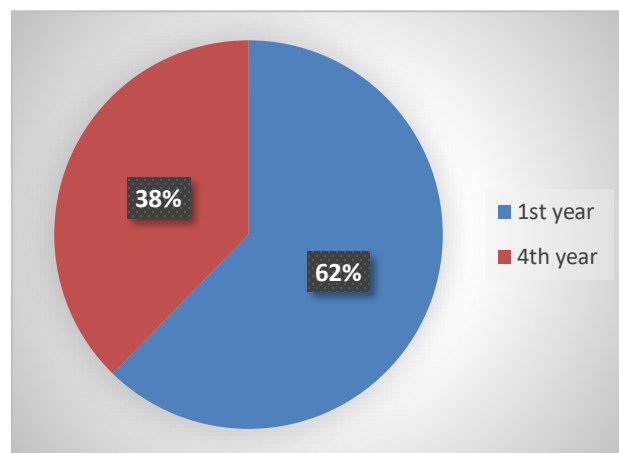
phenomena from none to very severe levels (1-5) (Table 1). The twenty component Scores of all 20 components were then added to obtain a global CIPS score that ranges from 20 to 100; the greater scores indicate severe imposter syndrome. The participant obtaining scores equal to 62 was labelled as ‘imposter’. Questions regarding demographics were added in the questionnaire. Link of questionnaire developed in Google forms was shared with the participants. Descriptive statistics were determined and SPSS version 24 was used to apply Chi-square test.

## RESULTS

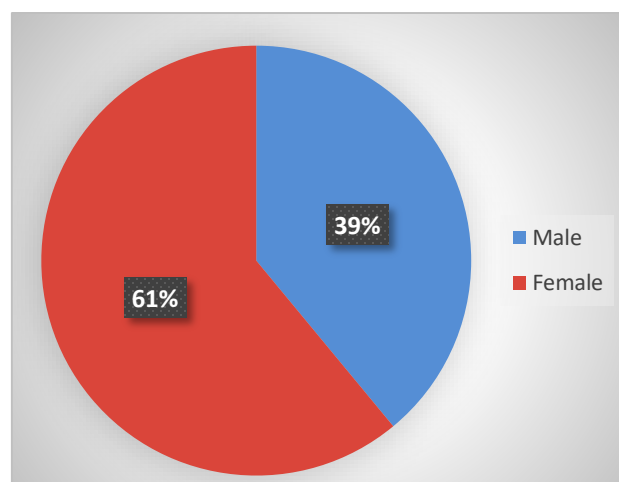
The questionnaire was sent to dental students of 1<sup>st</sup> year and 4<sup>th</sup> year, 138 students returned the questionnaire (Clance IP Scale). Out of 138 students 86 (62.0%) were from 1<sup>st</sup> year and 52(38.0%) were from 4<sup>th</sup> year (Figure 1), 84 (61%) male and 54 (39%) female (Figure 2). The overall mean age of the respondents was  $20.03 \pm 1.051$  years whereas mean age of male students was  $20.05 \pm 1.12$  and of female students was  $19.51 \pm 1.006$  years respectively.

The frequency of imposter syndrome was 52.1% among Dental Students. The characteristics of imposter syndrome among total participants are depicted in figure 3. Intense IP characteristics were present in 15 (10.8%), few IP characteristics were present in 6 (4.3%) while moderate IP characteristics were found in 60(43.3%) and frequent IP characteristics were found in 57 students (43.1%).

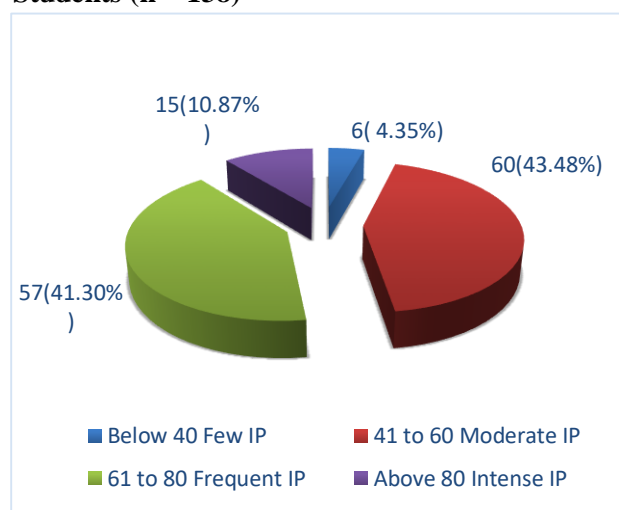
The gender predisposition of IP characteristics among dental students after scoring of questionnaires is shown in the figure 4. Few IP characteristics were present in 4 (7.4%) male and 2 (2.3%) female dental students. Moderate IP characteristics were found in 27 (50%) male and 33 (39.2%) females. Frequent imposter feelings were found in 18 (33%) male and 39 (46%) females.



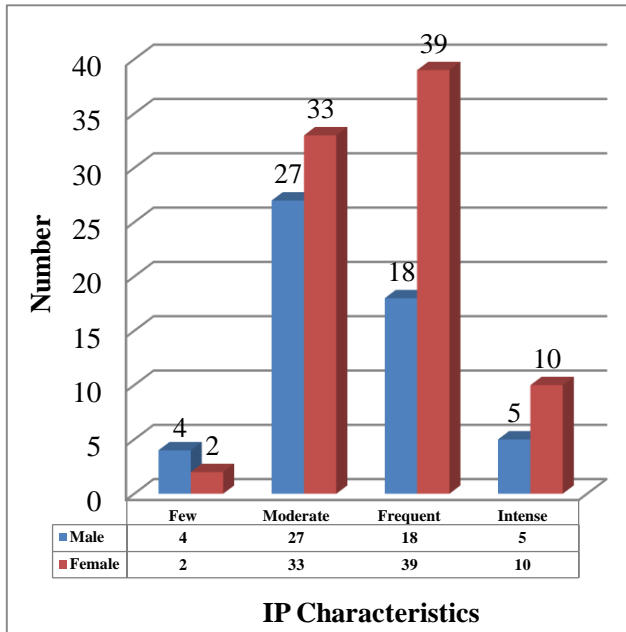
**Figure 1: Percentage of 1<sup>st</sup> and 4<sup>th</sup> year Dental Students (n = 138)**



**Figure 2: Percentage of Male and Female Dental Students (n = 138)**



**Figure 3: IP characteristics of the participants based on Clance IP Scoring**



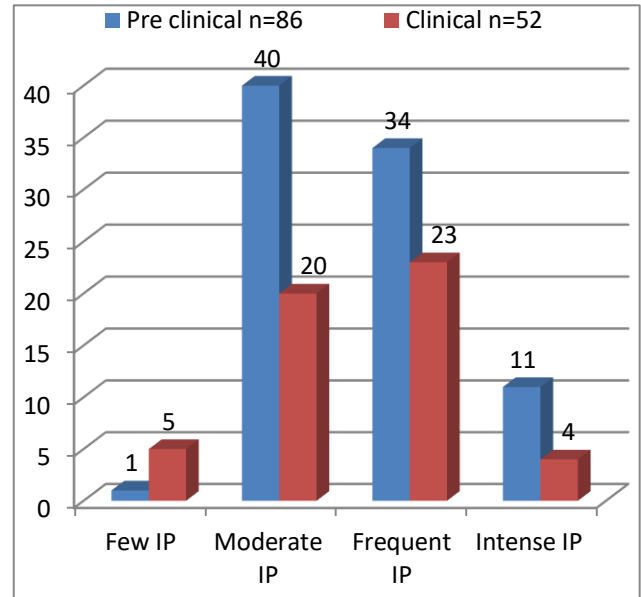
**Figure 4: Comparison of IP Characteristics among Male and Female MBBS Students**

Among 15 participants that experienced Intense IP characteristics 10 (11.1%) were female and 5 (9.2%) were males (Figure 3). Chi-square test showed non-significant (p value = 0.13) difference in IP characteristics among male and female.

Among 86 students of preclinical year 40 (46.5%) exhibit moderate, 34 (39.5%) exhibit frequent while only 11 (12.7%) exhibit intense and 1 (1.1%) experienced few IP characteristics (Figure 5). Among 52 students of clinical year, 20 (38.4%) experienced moderate imposter feelings, 23 (44.2%) showed frequent imposter characteristics while only 5 (9.6%) students had few and 4 (7.6%) had intense IP characteristics. However, the difference in the IP characteristics between the students of preclinical and clinical year is not significant (p value = 0.36).

## DISCUSSION

Imposter syndrome has been found to be a strong predictor of general psychological distress. Another interesting fact reported in literature is that there is a strong association between Imposter syndrome with various components of depression,



**Figure 5: Comparison of IP Characteristics among Dental Students of Pre-Clinical & Clinical Year**

burnout, anxiety and self-esteem issues<sup>11</sup>. In the current research there is 52.1% frequency of imposter syndrome among dental students. A study carried out on dental, nursing, pharmacy and medical students revealed that among the participants there were 30% imposters<sup>5</sup>. Oriol et al. concluded from his research that there is 45.9% prevalence in residents of family medicine<sup>7</sup>. A similar trend has been seen in another research conducted in Malaysia on medical students. It reported that there is 45.7% frequency of imposter syndrome<sup>12</sup>.

Present study was designed to determine the frequency of imposter syndrome and its characteristics of this syndrome among students. Intense IP characteristics were present in 15 (10.8%), few IP characteristics were present in 6 (4.3%) while moderate IP characteristics were found in 60 (43.3%) and frequent IP characteristics were found in 57 students (43.1%). A study conducted on medical students of Nishtar Medical University also categorized the students according to IP characteristics using Clance IP scale and reported Few IP in 5 (2.64%), moderate IP in 72 (38.09%),

Frequent IP in 103 (54.49%) and very intense IP in 09 (4.76%)<sup>3</sup>.

In present study the number of females is greater than males in all categories of IP. However, number of females was less as compared to males in the mildest category. Male dominance in mild and few IP experience was also documented by Maqsood H et al but female preponderance was seen in the category of moderate, frequent and intense IP experience in his study<sup>3</sup>. Nevertheless, mix trends regarding the gender predisposition were reported in recent research yet it was reported in highly accomplished females in the past<sup>2</sup>. Additional studies reported its high frequency in males as compared to females<sup>12</sup>. However, some researchers did not find significant differences between males and females regarding characteristics of IP Phenomena. In most of the medical colleges in Pakistan, there are more female students as compared to male students. So, the high prevalence of imposter phenomenon affects significantly on the majority of individuals during medical education and training<sup>3</sup>.

Greater percentage of Preclinical students showed moderate, frequent and intense IP experience as compared to preclinical students however, few IP characteristics were found more in students of clinical year. However, the difference was not significant. Maqsood et. Al reported similar results and did not find any association between the year of study and characteristics of IP<sup>3</sup>. However, Jostl G did not find any link between promotion into senior and IP phenomenon<sup>13</sup>.

### Recommendations

- Imposter syndrome may have a negative effect on the productivity of a dental professional. Hence early identification of students must be carried out to evaluate who is at risk of quitting the profession due to false beliefs of being incompetent to fulfill professional duties as per the expectations.

- There should be strict implementation of extensive programs with the intention of helping students experiencing the negative feelings of imposter syndrome. Students should be taught how to handle or avoid negative feelings by boasting their self-esteem. They should also be trained how to set achievable goals for themselves.

### CONCLUSION

The frequency of imposter syndrome is high among dental students. Its characteristics ranged from moderate to frequent imposter experiences in most of the dental students. Non-significant difference in the IP characteristics was found between male and female students as well as students of preclinical and clinical year.

### Conflicts of interest

The authors declare that they have no conflict of interests.

### Contributors

Munsara Khalid Khan contributed to Manuscript writing & data collection. Result compilation & Statistical analysis were done by Khalid Rahim Khan.

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