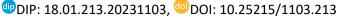
The International Journal of Indian Psychology ISSN 2348-5396 (Online) | ISSN: 2349-3429 (Print)

Volume 11, Issue 3, July- September, 2023



https://www.ijip.in

**Research Paper** 



# 'Frauds' In the Classroom: The Prevalence and Relationship between Impostor Phenomenon, Academic Motivation and Study Engagement among Indian College Students

Gayathri Sankar J<sup>1</sup>\*, Dr. Uma Krishnan<sup>2</sup>

## **ABSTRACT**

The focus on deciding a career based on important academic choices in order to experience financial autonomy, along with having to deal with other specific responsibilities of early adulthood, adds great pressure to students in universities. It thus becomes important to understand factors that influence the academic performance and motivations of college students who wish to obtain a degree for their future employment. This study aimed to understand a psychological concept known as the Impostor phenomenon, and its relationship with Academic Motivation and Study Engagement among college students, specifically in India. The former concept explains a feeling of 'intellectual fraudulence' among high achievers, while the latter variables determine how motivated a student would be in wanting to complete and attain an academic degree. The data was collected through an online survey involving 186 college students, conveniently sampled across India. The quantitative results showed that the impostor phenomenon, exhibiting a high prevalence rate, is significantly correlated to academic motivation (specifically intrinsic); and that the average scores for both the variables were differentiated by gender, with higher impostor phenomenon feelings experienced by females. Recommendations regarding the results were suggested in the form of targeted interventions to be inculcated within institutional frameworks, in order to eliminate the negative effects of the impostor phenomenon on student performance. These included implementing programs such as support groups, co-located psychological resource centres, and technology-based surveys for screening, along with suggestions to change the behaviour of teachers, and cultural parenting norms of those who interact with vulnerable students.

**Keywords:** Impostor Phenomenon, Academic Motivation, Study Engagement, Indian College Students, Student Mental Health

acing numerous causal factors of stress is inevitable especially in the life of a college student (Brown, 1992). Society's tendency to view entrance into college as a major milestone that marks an individual's first steps into adulthood is one of the major sources of stress for students aiming to excel in their academic spheres. This is partly due to

<sup>&</sup>lt;sup>1</sup>Christ University, Hosur Road, Campus Road, Bhavani Nagar, Saddagunte Palya, Bengaluru, Karnataka <sup>2</sup>Christ University, Hosur Road, Campus Road, Bhavani Nagar, Saddagunte Palya, Bengaluru, Karnataka \*Corresponding Author

Received: April 15, 2023; Revision Received: August 13, 2023; Accepted: August 16, 2023

<sup>© 2023,</sup> Gayathri, S.J. & Krishnan, U.; licensee IJIP. This is an Open Access Research distributed under the terms of the Creative Commons Attribution License (www.creativecommons.org/licenses/by/2.0), which permits unrestricted use, distribution, and reproduction in any Medium, provided the original work is properly cited.

the assumption that students automatically become equipped with an increased level of cognition and maturity during this phase of life, which enhances the assumption that they capable of handling the multifaceted experience of college. This stage is thus considered to be a significant period of transition that shapes an individual's future growth.

The factors of career and financial independence being the most necessary skills required in this stage marks a requirement for students to focus on and excel in one's academic performance. Notably, interacting combinations of these stressors, such as high academic expectations, considerably lower external support, both academically and financially, along with other major responsibilities (personal, moral, social pressures, and more) lead to increased levels of anxiety, depression, sleep disturbances, loneliness and even suicidal ideations among young adults (O'Donovan & Hughes, 2008). It thus becomes important to study the factors that could influence the academic motivations and behaviours of college students who are growing to be future contributors and innovators in the world of work. This study would hence address the influences of a few such connected factors.

## The Impostor Phenomenon

The Impostor phenomenon or IP (sometimes known as the Imposter syndrome) was first identified by Clance and Imes in 1978, in order to describe the characteristic traits of high-achieving women who seemed to find it difficult to internalize their own objective achievements and successes. They described these patterns as pervasive feelings of fraudulence, since they were unable to attribute their achievements to their actual capabilities, causing them to feel unworthy of the recognition they receive due to the same. These individuals were later termed to be 'impostors' in order to loosely describe their tendency to avoid internalizing their achievements and successful behaviours.

Impostors believed that others who acknowledged them as intelligent have actually been fooled, and that their wins are usually because of luck or external factors. Since they feel like they do not deserve their successes, they assume that future possibilities of the same are very unlikely (King & Cooley, 1995). This is further empirically understood to be a clinically significant cause for conditions like anxiety and stress in such individuals (Cowman & Ferrari, 2002; Kets de Vries, 2005). Ultimately, impostors engage in workaholic behaviours that can lead to circumstances of burnout and mental exhaustion (Cowman & Ferrari, 2002; Kets de Vries, 2005; Kumar & Jagacinski, 2006).

Such behaviours have thus been recently observed to be prevalent in undergraduate and postgraduate student populations. The Impostor phenomenon has been found to be evident across numerous undergraduate disciplines like psychology (Ferrari & Thompson, 2006), engineering (Felder, 1988), medicine (Henning, Ey & Shaw, 1998) and more. Impostors often disengage from academically productive behaviours (resulting in absenteeism and the like) and tend to avoid evaluative situations that are common in institutions (Ross et al., 2001). It can hence be implicitly understood that the Impostor phenomenon is a significant psychological factor that influences the mental health of students in academic environments. Students with high levels of the Impostor phenomenon tend to bring down their professional aspirations and goals, thus affecting their future career development (Hampton & Feller, 2019). Considering that the future choices of a college student involve selecting and engaging in a prospective career path, addressing the impact of this phenomenon early in their academic life becomes paramount.

#### Academic Motivation

Academic motivation can be understood as the factors that affect a person's willingness and effort to obtain an academic degree. Academic motivation is known to mainly determine whether a student continues to engage in their course and completes all the requirements of the same. One of the most significant understandings of motivation is given by Deci and Ryan's self-determination theory (2000). This theory posits that motivation can be separated into 'intrinsic' and 'extrinsic', (along with a concept that defines a lack of motivation, known as amotivation). Intrinsic motivation is understood as the cause of achievementrelated behaviour being attributed to internal factors like one's own interest, and extrinsic is when the attribution is to external factors like recognition from others or rewards of any kind.

It is understood that intrinsic motivation produces positive results regarding the achievement-related behaviour of any student. Understandably, the academic motivation levels of students would eventually further their desire for accomplishment within their course, through attempts to engage in increasingly complex work and learning more than what is required of them. Numerous studies showed that a student's academic performance is determined significantly by their academic motivation (Green et al., 2006; Linnenbrink & Pintrich, 2002). Significant literature on the factor of academic motivation focuses on its effect on students' learning approaches, patterns of thinking, and academic performance (Komarraju & Karau, 2005).

## Study Engagement among Students

Work engagement, for any activity in general, is defined as a positively consistent workrelated psychological state that encourages three fulfilling concepts related to engaging in any work activity, namely: vigor, dedication and absorption (Schaufeli et al., 2002). These refer to the vitality and proactivity experienced while doing work; commitment to finishing a task; and being wholly concentrated on putting in the required effort for the work, respectively. Engagement, in the context of students' academic behaviours, helps determine how much of a positive interaction a student has with the work done for their course, while identifying with and producing significant outputs for their institution.

It is understood that study engagement thus involves an expenditure of purposeful effort and active commitment towards all aspects of their academic work (Krause & Coates, 2008). Since this concept has also been significantly studied to influence academic motivation (Tuominen-Soini & Salmela-Aro, 2014), students who are engaged in their academics value the practice of studying more, and are seen to engage in lesser academic work avoidance.

#### REVIEW OF LITERATURE

A significant study by Alrayyes et al. (2020) determined the prevalence and association between the Imposter syndrome and burnout among 384 adults in Saudi Arabia, using selfadministered questionnaires for the two variables, along with depression, anxiety and stress. The results were able to conclude statistically significant associations between the Imposter syndrome and the different domains of burnout, stress and depression. Since this study was conducted specifically in the northern region of Saudi Arabia, a need for an exploration of similar psychological constructs within the geographical region of India emerges. Hence, this would be addressed in the current study.

Another study of importance relevant to the current research is one performed by Adonis in 2010. It examined the association between personality, academic motivation and burnout among 150 college students. The survey was able to conclude that there was a direct effect of academic motivation contributing towards student burnout, thus suggesting a possible link between other psychological concepts related to the two. A connection could conclusively be hypothesized to exist between the Impostor phenomenon and academic motivation, through the study's inference of burnout being a commonly influencing psychological variable between the two.

A similar notable study carried out by Atik and Celik (2021) analysed relationships between teacher candidates' levels of academic motivations, burnouts and engagements. The study was performed on 861 participants from a state university in eastern Turkey, and the results were subjected to structural equation modelling. One of the study's significant results was that the levels of academic motivation predicted those of work engagement positively and directly. In addition to the current study focusing on the Indian population as opposed to the Turkish region, the inference of a direct link between work engagement and academic motivation could further suggest an additional link between these variables in relation to the concept of the Impostor phenomenon. The current study would also target the student population and the behaviours described by their academic work engagement, in specific.

A previous study by Zhang, Gan and Cham (2007) had aimed to establish an association between perfectionism, academic burnout and student engagement. This was conducted on 482 Chinese college students using a battery of questionnaires. The results established that burnout and engagement were negatively correlated, and that some aspects of perfectionism were correlated with burnout and engagement. This study thus included an involvement of the psychological dimension of perfectionism, which was related to different variables involved in academic performance.

The abovementioned assumption is also particularly explained by a study conducted by Chelsey et al. (2021) on college students. The study aimed to examine relationships between the Imposter syndrome, perfectionism and stress levels of 388 college students, and was conclusively able to identify a relationship between the levels of perfectionism and the Imposter syndrome. Thus, a common correlating factor of perfectionism affecting variables such as student work engagement (as mentioned previously) could further strengthen the hypotheses to be presented in the current study.

This study also mainly tries to bring to light the prevalence of the Impostor phenomenon among students, which can show the need for mental health screenings in such impressionable populations. A qualitative ethnographic study by Barker et al.

(2002) concluded that females suffer relatively more from IP than their counterparts. The explanation for this was provided by Eccles et al. in 1993, who discussed that parents' gender role stereotypes for their children's achievements influence their attributions. Hence, parents would often assume and state that male children's successes are due to their talent; and that of female children are due to effort and other external factors, due to their worth being determined by how much they provide or serve. This study would also try to confirm this existing result, in order to determine whether females are truly more affected by this psychological phenomenon than males, considering that gender stereotypes are still prevalent in India.

Thus, understanding the influencing factors of students' academic performance can subsequently help create interventions that aim to reduce academic dropouts, which would otherwise, if left unchecked, cause mental health problems within academic environments, further decreasing their professional and academic output, and leaving them unmotivated in choosing careers. If targeted orientations and discussions on the Impostor phenomenon can be brought to academic institutions, students can avoid the detrimental effects of this psychological concept affecting their academic performance.

# MATERIALS AND METHODS

## Research Objectives

- To determine a relationship between the Impostor phenomenon and academic motivation among Indian college students.
- To determine a relationship between the Impostor phenomenon and study engagement among Indian college students.
- To understand the prevalence of the Impostor phenomenon differentiated by the demographic feature of gender.

## Research Hypotheses

- H1: There is a significant relationship between the Impostor phenomenon and academic motivation among Indian college students
- H2: There is a significant relationship between the Impostor phenomenon and study engagement among Indian college students
- H3: There is a significant difference in the prevalence of Impostor phenomenon between Indian male and female college students

#### **Participants**

This study was conducted on 186 participants targeted through convenience sampling.

## **Inclusion Criteria:**

- Currently a student in any college or institution
- Residing in India
- Between 18 to 25 years of age

#### **Exclusion Criteria:**

- Presence of any diagnosed psychiatric disorder or clinical condition
- Residence in any country other than India

## **Materials and Scoring**

The Impostor phenomenon was measured by the Clance Impostor Phenomenon scale developed by Pauline Clance in 1985, containing sample items that assess whether an individual experiences intellectual fraudulence with respect to their work or effort. The internal consistency reliability (coefficient of alpha) is 0.92 for the scale. This 20-item questionnaire uses a Likert scale format with a 5-point response range: 1 point for 'not at all true', 2 for 'rarely', 3 for 'sometimes', 4 for 'often' and 5 for 'very true'.

Academic motivation was measured by the Academic Motivation scale AMSC-28 developed by Vallerand et al. (1992), containing items that determine an individual's reasons for going to college. The internal consistency coefficient of alpha for the scale is

0.81, with a test-retest reliability of 0.79. This 28-item tool uses a Likert scale format with a 7-point response range with 1 point for the response 'Does not correspond at all' to 7 for the response 'Corresponds exactly'.

Study engagement was measured by the Utrecht Work Engagement Scale-S, developed by Schaufeli and Bakker (2003). This scale has good psychometric properties consisting of three subscales, namely Vigor (5 items), Dedication (5 items), and Absorption. The internal consistency alpha coefficient values for the three subscales were 0.867, 0.819, and 0.903 respectively. This 14-item questionnaire uses a Likert scale format with a 7-point response range, with 0 points for 'Never' to 6 points for 'Always (everyday)'.

#### Data Collection

After obtaining online consent from the participants, the three scales (the Clance IP scale, the Academic Motivation scale AMSC-28, and the Utrecht Work Engagement Scale-S) were administered consecutively through an online survey using the encrypted Redcap platform. After data collection and the coding of the participants' responses, data analysis was conducted. All ethical considerations including informed content, confidentiality, anonymity and data coding were carried out.

#### Variables Used

The Impostor Phenomenon is understood as a psychological state, due to which, individuals doubt their internal abilities and skills, resulting in an internalised state of fraudulence (Langford & Clance, 1993).

Academic motivation is understood as involving students' academic behaviours such as how much effort they put into work, how effectively work is organized, what they choose to pursue further, and how they face obstacles faced while working.

Study engagement is understood as a positive work-related mental state characterized by an individuals' levels of vigor, dedication and absorption (Schaufeli et al., 2002).

## RESULTS

248 participants had completed a survey containing three questionnaires that studied the Impostor Phenomenon, Academic Motivation, and Study Engagement, respectively. Out of the total number of participants, the responses of 62 individuals had to be removed due to missing data, and some of the information not meeting the inclusion criteria. The remaining 186 responses were considered for the study's data analysis procedures. The results of the final data's descriptive statistics are shown in Table 1.

Table 1.0 Descriptives of the data received for the three study variables

	Gender	Impostor Phenomenon	Academic Motivation	Study Engagement
N	Female	141	141	141
	Male	45	45	45
Mean	Female	65.9	6.95	50.4
	Male	61.5	4.19	46.1
Std. error mean	Female	1.09	0.330	1.18
	Male	1.83	0.719	1.88
Median	Female	65	7.75	51

'Frauds' In the Classroom: The Prevalence and Relationship between Impostor Phenomenon, Academic Motivation and Study Engagement among Indian College Students

	Male	61	3.83	49
Standard deviation	Female	13.0	3.92	14.0
	Male	12.3	4.83	12.6
Variance	Female	169	15.3	195
	Male	150	23.3	159
Shapiro-Wilk W	Female	0.995	0.964	0.988
	Male	0.973	0.944	0.968
Shapiro-Wilk p	Female	0.929	<.001	0.266
	Male	0.372	0.030	0.240

According to the Table, the mean Impostor Phenomenon score was found to be higher in females (M = 5.9, SD = 1.09, SE = 13.0) than in males (M = 61.5, SD = 12.3, SE = 1.83). The mean score of Academic motivation in the female participants (M = 6.95, SE = 3.92, SD = 0.33) was much higher than that of males (M = 4.19, SE = 4.83, SD = 0.72). In a similar fashion, females had once again received a higher mean score (M = 50.4, SD = 14.0, SE = 1.18) on Study Engagement as compared to males (M = 46.1, SD = 12.6, SE = 1.88). This indicated that the female population is more vulnerable to receiving higher scores in dimensions like the Impostor Phenomenon, even though they show higher academic motivation levels and more intense study engagement.

Since only the variables of the Impostor Phenomenon (F = 0.251, p = 0.617) and Study Engagement (F = 0.534, p = 0.566) had met the assumption of normality and homogeneity, a comparative t-test was performed on the data (N = 186). According to the t-test scores, there was a significant difference in the scores of the Impostor Phenomenon between females and males (t(184) = 2.0, p = 0.047). There was no statistically significant difference in the scores received on Study Engagement between males and females (t(184) = 1.84, p = 0.068). According to the former result, the third hypothesis of the study is accepted. Hence, there is a significant difference in the prevalence of Impostor Phenomenon among college students differentiated by gender.

Since the variable of Academic Motivation had not met the assumption of normality, a Mann-Whitney U test was performed to determine statistical differences in the scores received on the same. It was once again similarly observed that there was a significant difference in the scores of Academic Motivation between females and males (p = 0.001). According to the Shapiro-Wilk descriptive scores of both the populations on all the three variables, the assumption of normality was only met for the variables of Impostor Phenomenon (p = 0.93; p = 0.37) and Study Engagement (p = 0.27; p = 0.24); the data was found to not be normal for Academic Motivation alone (p < 0.001; p = 0.03). Thus, the statistical test of Spearman's correlation was selected for determining significant associations between the three study variables, the results of which are shown in Table 2.

Table 2.0 Correlation results of the study variables

		Impostor Phenomenon	Academic Motivation	Study Engagement
Impostor Phenomenon	Spearman's rho	_		
	p-value			
Academic Motivation	Spearman's rho	-0.245***	_	
	p-value	<.001		
Study Engagement	Spearman's rho	-0.080	0.589***	
8.6.	p-value	0.277	<.001	_

According to the table, there was found to be a negative correlation between the Impostor Phenomenon and Academic Motivation (r = -0.25, p < 0.001). This means that the higher the level of Impostor Phenomenon in an individual, the lesser level of academic motivation they possess. Additionally, there was seen to be a positive correlation between Academic Motivation and Study Engagement (r = 0.589, p < 0.001), as was already concluded in previously existing literature. This shows that the higher one's academic motivation, the higher their study engagement levels. The former results thus accept the study's first hypothesis. This means that there is a significant relationship between the Impostor phenomenon and academic motivation among Indian college students. Lastly, the latter part of the results disproves the second hypothesis of the study which stated that there is a significant relationship between the Impostor phenomenon and study engagement among Indian college students.

#### DISCUSSION

The current study aimed to understand critical concepts that affected the mental wellbeing of the vulnerable student population of India. The impostor phenomenon, notably understood to be one of the most prevalent issues faced by the youth, is highlighted as the main focus of this study. This was further studied in relation to other important variables related to students' academic development, such as academic motivation and study engagement. The study results with respect to the participants' scores on the Impostor Phenomenon scale showed that the prevalence of the same is high among college students, with the mean score of the population describing 'frequent experiences of impostor feelings.' Thus, according to the results, it was observed that the impostor phenomenon is a statistically significant psychological construct within the student population in the country.

The prevalence for the impostor phenomenon was also differentiated by gender, wherein females scored significantly higher in the scale as compared to males. This is substantiated by the existing results of another study by Rosenstein et al. (2020) which concluded that a larger portion of female students tend to experience the impostor phenomenon more than males. One of the significant explanations behind this difference involves an important factor that is to be considered in the academic environment of students. It is generally observed that individuals' doubt in their academic abilities begin from the classroom environment due to the attempts of some other students trying to show off their knowledge in class, leading to the formation of what is known as a 'defensive climate'. These defensive climates cause insecurities and distress in other students, and this concept is empirically studied to be more mentally problematic for females (Barker et al., 2002).

The psychological elements that constitute the 'academic culture' of today usually involve concepts like scholarly isolation, absence of proper mentoring, high pressures to publish academic papers, and increased competitiveness between students. These exact concepts have been studied to directly contribute to feelings of the impostor phenomenon in individuals (Howe-Walsh & Turnbull, 2016). When studied further by Vaughn et al. (2019), these issues were also closely related to the main constructs involved in Deci's Self-Determination Theory (2000) which explains more about academic motivation and achievement. The theory's three aspects of competence, autonomy, and relatedness, can be theoretically related to the beforementioned elements that influence IP, thus establishing a link between the impostor phenomenon and academic motivation.

Thus, the next hypothesis that was confirmed by the results of this study was that of the relationship between the impostor phenomenon and academic motivation. The two variables were statistically negatively correlated, thus indicating that there is an influential interrelation between IP and the concepts involved in academic motivation. The elements of the self-determination theory that was earlier used to understand academic motivation have been observed to be involved in influencing the performance or internal factors of those who suffer from IP. This is further explained through existing literature in previous studies, such as that conducted by Vaughn et al. (2019) that concluded statistical correlations between the impostor phenomenon and measures of motivation among women.

Lastly, the conclusive evidence of a statistically significant relationship between academic motivation and student engagement as substantiated by the results of this study only strengthens previously accepted literature. This is consistent with the results of a previous study carried out by Black and Deci (2000), in terms of having already found a correlation between academic motivation and engagement. Another study by Dogan (2015) also established the correlation between student engagement and academic motivation, along with other factors such as academic self-efficacy, that affect student performance. Additionally, the significant difference established between both the genders in the scores on academic motivation, in terms of females scoring higher, was substantiated by the results of a previous study by Brouse et al. (2010). They established that female college students scored significantly higher in all the components involved in intrinsic and extrinsic academic motivation, similar to the current study's results.

# Implications and Suggestions

The implications from the results of this study are many. Neureiter and Traut-Mattausch (2016), in their study, had concluded that individuals with high impostor feelings often report lesser career planning tendencies and motivations to lead. This would negatively affect the career decisions of students who have finished their studies and are yet to move into the world of work. Additionally, those with the impostor phenomenon are less likely to engage in training and career development programs later on in life. Thus, the need for interventions that target the IP feelings experienced by students who are required to become the contributors of the future world of work becomes paramount.

Institutions that consider the students' learning environment and ethos to be of significant importance must focus on screening measures focused on understanding the possibility of the development of impostor phenomenon among their students, in order to specifically direct them further to seek interventions that would reduce their feelings of demotivation. Both medical and behavioural health centres or psychological resource hubs involved in

providing psychological assessments and assistance can be co-located in these institutions to ensure collaborations for health care (Pedrelli et al., 2015).

The conclusion derived from this study of the impostor phenomenon being more womencentred is also of considerable importance, and this phenomenon is understood to be experienced by a specific set of women who are classified as 'high-achieving'. Clance and Imes (1978) suggested that one recommended practise to navigate through women's dysfunctional impostor beliefs is to increase interactions between different high-achieving women through group therapy sessions. This would enhance their mental well-being through feelings of relatedness and empathy, both for themselves and the other.

Overall, it also becomes important to note that the significant relationship between the IP and academic motivation, in essence, is a student-centric issue. This increases the need to target students' needs within academic institutions, in order to systemically enhance their overall mental health. Graduate students suffering from IP can be assisted through specific peer support groups that enhance informal peer networking (Cope-Watson & Betts, 2010) and hence build a sense of camaraderie between those who feel the same, within a dynamic group setting. This would decrease their feelings of isolation (thinking that they're alone in feeling this way) and self-doubt. It is also suggested that a diverse campus staff involvement is required to target this phenomenon, with the support of teachers and senior faculty who also experience the same condition, because it would immensely help students to see themselves especially among those that they look up to or seek help and guidance from (Ramsey & Brown, 2017).

Similarly, it was understood through previous literature that one of the most important psychological needs related to students' intrinsic motivation is that of connectedness. This can be targeted and enhanced through the presence of student or peer support groups, as mentioned before, in order to make them feel connected with others in the same context. Additionally, supportive interpersonal relationships, especially with teachers, and even parents, would help enhance students' intrinsic academic motivation (Chirkov & Ryan, 2001). Empathy, personalized doubt-clearing and support, as well as validation of individual feelings help immensely in increasing students' self-determined motivation.

Additionally, one of the most important factors to consider while providing treatment strategies for mental health in general to the student population is their hesitation to seek help due to limited time and social stigma. One of the most efficient ways to circumvent this issue is to provide them with technology-based surveys and psychoeducation. A study by Haas et al. (2008) concluded that an approach using web surveys increased the help-seeking behaviours of college students. In lieu of this, using social networking sites like Facebook to screen for mental health issues was found to be both cost-effective and feasible overall (Youn et al., 2013).

Lastly, taking into account the Indian context, it's possible that many college students are still dependent on their parents or caretakers, owing to the traditional family culture and collectivistic nature of the Asian society. Clance (1986) had discovered that there were many familial patterns involved in the development of the feelings of IP in children. This included inconsistent feedback on one's performance between those of parents and those of people in the outside world. In addition to this, limited praise and overprotectiveness from the part of the parents can cause the early development of pathologies related to the impostor

phenomenon. Similarly, even for academic motivation, it's observed that controlling parenting can contribute to an inhibited sense of self-determined regulation in an individual (Joussemet, Landry & Koessner, 2008). Thus, parents could also be a part of the treatment and intervention stages of their children's mental health care. This can be carried out by educating parents about understanding their child's early warning signs of academic pathology, while also making them aware about controlling the behavioural risk factors within their parenting styles that could contribute to the same.

Despite significant understandings derived from this study, a number of limitations are also to be considered. The population examined for this study was of a relatively lesser size, which had unfortunately contributed to a non-normal distribution of the data points involved in the study. This is one of the reasons that had limited the types of statistical analyses that could have been used to further examine the data. It is also possible that the high proportion of female participants over male participants in the study was a limitation in understanding the true presentation of the data. Moreover, most of the data was concentrated on students from specific research-driven prestigious universities in specific regions of India, and this might have contributed to an unintended focus on a high-achieving student population in specific. Lastly, since the process of data collection used a self-report measure, it is possible that students might have underreported their true feelings with respect to the three variables used in the study, since answering truly otherwise would have involved a tendency to expose their true abilities that might not be up to their own expectations.

#### CONCLUSION

Students studying in colleges and universities have now been reporting greater numbers of cases involving increased psychological distress. Some of the main factors involved in the most influential periods of late adolescence and early adulthood are related to the academic performance and institutional pressures students face. Since this is the time that they are required to make important decisions related to career and self-improvement, targeting the factors that affect their proper cognitive and emotional growth and development becomes important. Thus, this study aimed to understand if there's a correlation between a significant construct known as the Impostor Phenomenon, along with other ac academic variables such as Academic Motivation and Study Engagement, within the student population in India. It was found that the impostor phenomenon was significantly correlated to academic motivation in the students, along with the previously existing inference that academic motivation was also linked to study engagement. Moreover, the students' scores on both the impostor phenomenon and academic motivation differed significantly by gender, with females experiencing both the issues more in comparison to males. The study results importantly pointed to a rising prevalence of frequent IP feelings, especially among Indian college students. The link between the correlated variables were understood and described to be significant in the context of the academic population. Due to the high need to reduce the impact of the impostor phenomenon on student motivation and performance, targeted interventions and focused screening processes must be held at academic institutions that place emphasis on student performance and output. Interventions in the form of support groups and the like were suggested for individualised mental health care. Changes in teachers' and parents' attitudes towards students experiencing the impostor phenomenon and decreased academic motivation are recommended. In addition to this, the use of technology, and psychoeducation for the parents of college students, were also advised as a means to avoid the development of psychological pathologies that could lead to negative effects on

academic performance. This study was also able to bring empirical focus to the Indian student population, adding to the regional literature on this phenomenon.

# REFERENCES

- Barker, L. J., Garvin-Doxas, K., & Jackson, M. (2002, February). Defensive climate in the computer science classroom. In *Proceedings of the 33rd SIGCSE technical symposium on Computer science education* (pp. 43-47). https://doi.org/10.1145/563340.563354
- Brouse, C. H., Basch, C. E., LeBlanc, M., McKnight, K. R., & Lei, T. (2010). College students' academic motivation: Differences by gender, class, and source of payment. *College Quarterly*, *13*(1), n1. ISSN: ISSN-1195-4353
- Brown, R. T. (1992). Helping students confront and deal with stress and procrastination. *Journal of College Student Psychotherapy*, 6(2), 87-102. https://doi.org/10.1300/J035v06n02\_09
- Chirkov, V. I., & Ryan, R. M. (2001). Parent and teacher autonomy-support in Russian and US adolescents: Common effects on well-being and academic motivation. *Journal of cross-cultural psychology*, 32(5), 618-635. 10.1177/0022022101032005006
- Clance, P. R., & Imes, S. A. (1978). The imposter phenomenon in high achieving women: Dynamics and therapeutic intervention. *Psychotherapy: Theory, research & practice*, 15(3), 241. https://doi.org/10.1037/h0086006
- Cope-Watson, G., & Betts, A. S. (2010). Confronting otherness: An e-conversation between doctoral students living with the Imposter Syndrome. *Canadian Journal for New Scholars in Education/Revue canadienne des jeunes chercheures et chercheurs en éducation*, 3(1). https://journalhosting.ucalgary.ca/index.php/cjnse/article/view/30474
- Cowman, S. E., & Ferrari, J. R. (2002). "Am I for real?" Predicting impostor tendencies from self-handicapping and affective components. *Social Behavior and Personality: an international journal*, 30(2), 119-125. https://doi.org/10.2224/sbp.2002.30.2.119
- David, A. (2010). Examining the relationship of personality and burnout in college students: The role of academic motivation. *Educational measurement and evaluation review*, *1*, 90-104. SSRN: https://ssrn.com/abstract=2509164
- De Vries, M. F. R. K. (2005). The dangers of feeling like a fake. *Harvard business review*, 83(9), 108. https://www.researchgate.net/profile/Manfred-Kets-De-Vries/publica tion/7592973\_The\_dangers\_of\_feeling\_like\_a\_fake/links/546388100cf2c0c6aec4e06d/T he-dangers-of-feeling-like-a-fake.pdf
- Dogan, U. (2015). Student engagement, academic self-efficacy, and academic motivation as predictors of academic performance. *The Anthropologist*, 20(3), 553-561. 10.1080/09720 073.2015.11891759
- Eccles, J. S., Arberton, A., Buchanan, C. M., Janis, J., Flanagan, C., Harold, R., ... & Reuman, D. (1993). School and family effects on the ontogeny of children's interests, self-perceptions, and activity choices.
- Felder, R. M. (1988). Felder's filosophy: Impostors everywhere. *Chemical Engineering Education*, 22(4), 168-169.
- Ferrari, J. R., & Thompson, T. (2006). Impostor fears: Links with self-presentational concerns and self-handicapping behaviours. *Personality and Individual Differences*, 40(2), 341-352. https://doi.org/10.1016/j.paid.2005.07.012
- Green, J., Nelson, G., Martin, A. J., & Marsh, H. (2006). The Causal Ordering of Self-Concept and Academic Motivation and Its Effect on Academic Achievement. *International Education Journal*, 7(4), 534-546. ISSN: ISSN-1443-1475
- Güngör, A., & Sari, H. I. (2022). Effects of Academic Motivation on School Burnout in Turkish College Students. *International Journal for the Advancement of Counselling*, 44(3), 414-431. https://doi.org/10.1007/s10447-022-09477-x
- Haas, A., Koestner, B., Rosenberg, J., Moore, D., Garlow, S. J., Sedway, J., ... & Nemeroff, C. B. (2008). An interactive web-based method of outreach to college students at risk for

- suicide. *Journal of American college health*, 57(1), 15-22. https://doi.org/10.3200/JACH .57.1.15-22
- Henning, K., Ey, S., & Shaw, D. (1998). Perfectionism, the impostor phenomenon and psychological adjustment in medical, dental, nursing and pharmacy students. *Medical education*, 32(5), 456-464. https://doi.org/10.1046/j.1365-2923.1998.00234.x
- Holden, C. L., Wright, L. E., Herring, A. M., & Sims, P. L. (2021). Imposter syndrome among first-and continuing-generation college students: The roles of perfectionism and stress. *Journal of College Student Retention: Research, Theory & Practice*, 15210251 211019379. https://doi.org/10.1046/j.1365-2923.1998.00234.x
- Howe-Walsh, L., & Turnbull, S. (2016). Barriers to women leaders in academia: tales from science and technology. *Studies in Higher Education*, 41(3), 415-428. https://doi.org/10. 1080/03075079.2014.929102
- Joussemet, M., Landry, R., & Koestner, R. (2008). A self-determination theory perspective on parenting. *Canadian Psychology/Psychologie canadienne*, 49(3), 194. https://doi.org/10. 1037/a0012754
- King, J. E., & Cooley, E. L. (1995). Achievement orientation and the impostor phenomenon among college students. *Contemporary Educational Psychology*, 20(3), 304-312. https://doi.org/10.1006/ceps.1995.1019
- Komarraju, M., & Karau, S. J. (2005). The relationship between the big five personality traits and academic motivation. *Personality and individual differences*, *39*(3), 557-567. https://doi.org/10.1016/j.paid.2005.02.013
- Krause, K. L., & Coates, H. (2008). Students' engagement in first-year university. *Assessment & Evaluation in Higher Education*, 33(5), 493-505. https://doi.org/10.1080/0260293 0701698892
- Kumar, S., & Jagacinski, C. M. (2006). Imposters have goals too: The imposter phenomenon and its relationship to achievement goal theory. *Personality and Individual differences*, 40(1), 147-157. https://doi.org/10.1016/j.paid.2005.05.014
- Langford, J., & Clance, P. R. (1993). The imposter phenomenon: Recent research findings regarding dynamics, personality and family patterns and their implications for treatment. *Psychotherapy: theory, research, practice, training*, *30*(3), 495.10.1037/0033-3204.30.3.495.
- Linnenbrink, E. A., & Pintrich, P. R. (2002). Motivation as an enabler for academic success. *School psychology review*, *31*(3), 313-327. https://doi.org/10.1080/02796015. 2002.12086158
- Neureiter, M., & Traut-Mattausch, E. (2016). An inner barrier to career development: Preconditions of the impostor phenomenon and consequences for career development. *Frontiers in psychology*, 7, 48. 10.3389/fpsyg.2016.00048
- O'Donovan, A., & Hughes, B. (2007). Social support and loneliness in college students: effects on pulse pressure reactivity to acute stress. *International journal of adolescent medicine and health*, 19(4), 523-528. https://doi.org/10.1515/IJAMH.2007.19.4.523
- Pedrelli, P., Nyer, M., Yeung, A., Zulauf, C., & Wilens, T. (2015). College students: mental health problems and treatment considerations. *Academic psychiatry*, *39*, 503-511. 10.1007/s40596-014-0205-9
- Ramsey, E., & Brown, D. (2018). Feeling like a fraud: Helping students renegotiate their academic identities. *College & Undergraduate Libraries*, 25(1), 86-90. https://doi.org/10.1080/10691316.2017.1364080
- Rosenstein, A., Raghu, A., & Porter, L. (2020, February). Identifying the prevalence of the impostor phenomenon among computer science students. In *Proceedings of the 51st ACM Technical Symposium on Computer Science Education* (pp. 30-36). 10.1145/332 8778.3366815

- Ross, S. R., Stewart, J., Mugge, M., & Fultz, B. (2001). The imposter phenomenon, achievement dispositions, and the five-factor model. *Personality and Individual Differences*, 31(8), 1347-1355. https://doi.org/10.1016/S0191-8869(00)00228-2
- Ryan, R. M., & Deci, E. L. (2000). Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. *American psychologist*, 55(1), 68. https://doi.org/10.1037/0003-066X.55.1.68
- Saad, A., Dar, U. F., Musab, A., Ahmed, A., & Nouf, A. (2020). Burnout and imposter syndrome among Saudi young adults. *Saudi Medical Journal*, 41(2), 189-194. 10.15537/smj.2020.2.24841
- Schaufeli, W. B., Martinez, I. M., Pinto, A. M., Salanova, M., & Bakker, A. B. (2002). Burnout and engagement in university students: A cross-national study. *Journal of cross-cultural psychology*, *33*(5), 464-481. https://doi.org/10.1177/0022022102033005003
- Tuominen-Soini, H., & Salmela-Aro, K. (2014). Schoolwork engagement and burnout among Finnish high school students and young adults: profiles, progressions, and educational outcomes. *Developmental psychology*, 50(3), 649. https://doi.org/10.1037/a0033898
- Vallerand, R. J., Pelletier, L. G., Blais, M. R., Briere, N. M., Senecal, C., & Vallieres, E. F. (1992). The Academic Motivation Scale: A measure of intrinsic, extrinsic, and amotivation in education. *Educational and psychological measurement*, 52(4), 1003-1017. https://doi.org/10.1177/0013164492052004025
- Vaughn, A. R., Taasoobshirazi, G., & Johnson, M. L. (2020). Impostor phenomenon and motivation: Women in higher education. *Studies in Higher Education*, 45(4), 780-795. https://doi.org/10.1080/03075079.2019.1568976
- Youn, S. J., Trinh, N. H., Shyu, I., Chang, T., Fava, M., Kvedar, J., & Yeung, A. (2013). Using online social media, Facebook, in screening for major depressive disorder among college students. *International Journal of Clinical and Health Psychology*, *13*(1), 74-80.: https://doi.org/10.1016/S1697-2600(13)70010-3
- Zhang, Y., Gan, Y., & Cham, H. (2007). Perfectionism, academic burnout and engagement among Chinese college students: A structural equation modeling analysis. *Personality and individual differences*, 43(6), 1529-1540. 10.1016/j.paid.2007.04.010

#### Acknowledgement

The authors immensely thank the participants, respective family members and friends, the institution of Christ (Deemed to be) University, and all the others who were involved in the study throughout.

## Conflict of Interest

The author(s) declared no conflict of interest.

#### Disclosure Statement

The authors report there are no competing interests to declare.

#### **Ethics Declarations**

The necessary ethical approval (No.: RCEC/00361/08/22) for this study had been provided by the Research Conduct and Ethics Committee of CHRIST (Deemed to be University).

# Biographical Note

The first author of this article, Gayathri Sankar J, is a Master's student of clinical psychology at Christ (Deemed to be) University, Bangalore, India. She has a keen interest in studying the motivational behaviours of individuals working in group, academic or occupational settings. She follows mindfulness-based approaches in forming her therapeutic advancements for

practise, and firmly believes in positive humanistic psychotherapy for healing individuals' mental distress.

The second author, Dr. Uma Krishnan, is a certified clinical psychologist, specializing in the area of child and adolescent psychology. She is an experienced faculty at the department of psychology at Christ (Deemed to be) University, and has a strong repertoire of research studies under her name. She is also assisting in numerous other student-led quantitative and qualitative projects in psychology.

How to cite this article: Gayathri, S.J. & Krishnan, U. (2023). 'Frauds' In the Classroom: The Prevalence and Relationship between Impostor Phenomenon, Academic Motivation and Study Engagement among Indian College Students. International Journal of Indian Psychology, 11(3), 2253-2267. DIP:18.01.213.20231103, DOI:10.25215/1103.213