

Exploring the Impact of Imposter Phenomenon on Academic Achievement: The Moderating Role of Self-Efficacy

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Abstract

A common occurrence among high-achieving students is the impostor phenomenon, which can adversely affect learning achievement, mental health, and overall wellness. This study quantitatively examines the connection between the feeling of Imposter Phenomenon and academic success, focusing on potential moderating factors like self-efficacy. A sample of students, aged 16 to 30, with no psychological disorders, participated in the study. Validated items, including the feeling of unworthy of success, Academic Performance, and General Self-belief were employed to ensure data reliability and validity. Purposive convenience sampling was used for participant selection. Outcomes show an adverse connection between Imposter Phenomenon and academic performance, emphasising the damaging impact of self-doubt on educational outcomes. However, self-efficacy did not serve as a moderating factor in this relationship. These findings suggest that while self-efficacy is crucial, addressing subjective feelings of inadequacy is crucial for fostering academic success and overall mental wellness. This research underlines the significance of interventions targeting the Imposter Phenomenon to enhance student performance and overall resilience.

Keywords

*Academic achievement
Imposter phenomenon
Mental wellness
Self-efficacy*

INTRODUCTION

Think of being a top performing student, frequently getting good grades and admiration from teachers. Yet, with these accolades, you feel like an imposter, constantly worrying that you will be revealed to be a cheater. This phenomenon, known as imposter phenomenon, affects millions of students worldwide, silently eroding their confidence and academic performance. A recent study found that 76% of students met imposter syndrome at some stage during their academic careers (Parkman, 2016). This debilitating condition can lead to decreased self-efficacy, reduced educational achievement, and even increased anxiety and depression. Clance and Imes (1978) first described the Imposter Phenomenon from her experiences in a medical environment. Individuals who experience the Imposter Phenomenon (IP) have feelings of self-doubt and are concerned that they will be exposed as frauds (Pákozdy et al., 2024). Feeling like a fraud when starting something new is more common than we think. New situations trigger our insecurities because they appear to have little room for error. However, imposter syndrome is when people frequently feel like they are not as capable or adequate as others consider them to be.

Clance and Imes (1978) coined the term “Imposter Phenomenon” to characterize the characteristics and behaviours of a group of successful women who were struggling with internalizing their success; these women spoke of sentiments of dishonesty, despite their numerous accomplishments and honours, they did not attribute their success to their abilities. Impostors may influence science students’ lives, mainly in terms of their education settings and leadership dignity (Htay et al., 2022). Imposters believe they are not deserving of the amount of recognition they are getting because they do not think they have earned such recognition based on their capabilities, causing heightened levels of anxiety and stress (Clance & Imes, 1978).

The cognitive-behavioural approach is an established theoretical framework that contends that negative self-beliefs and distorted perceptions are the foundational causes of imposter syndrome (Batchelder, 2020). This theory states that people who experience imposter syndrome often exhibit cognitive distortions such as catastrophizing, which is anticipating the worst in every situation, disregarding positives, which means dismissing or negating one’s accomplishments, and overgeneralization, which is making extensive negative conclusions based on isolated incidents. These cognitive biases impair self-confidence and lead to a recurring feeling of inadequacy. For individuals who battle imposter syndrome, success will be linked to lowering standards, networking, timing, and appeal. Instead, success is ascribed to their ability to conceal the actual character of their performance through effective presentation. The imposter has developed a very favourable but false perception of skill. Imposter Phenomenon refers to those who, despite overwhelming evidence to the contrary, continue to believe that their accomplishments are the

result of pure luck or even mistake and that they are not as smart or capable as others. IP is typified as perfectionism, self-doubt, attributing one's accomplishments to other forces, and a lack of self-assurance and a sense of belonging (Wu et al., 2022).

Academic grades for those with high IP scores are typically not different from those of people with low IP scores. In addition, they continue to act like impostors by avoiding conflict and disagreement with others by interacting with charm and passive compliance. They adopt obedient actions in reaction to cultural stereotypes (Clance & Imes, 1978). Ultimately, impostors' actions and accomplishments make them feel competent and self-assured. However, they experience fear, despair, and anxiety. Studies conducted in related fields, such as among medical students and healthcare professionals, have highlighted the negative impact of imposter syndrome on mental health and general well-being. Similarly, burnout and imposter syndrome among healthcare professionals were significantly correlated by Bravata et al. (2020). Students with imposter phenomenon are more prone to suffer from despair and anxiety (Bravata et al., 2020). Imposter phenomenon can lead to decreased self-efficacy, reducing students' confidence in their abilities.

Research Objectives

- To examine the relationship between imposter phenomenon and student academic achievement
- To investigate the moderating role of self-efficacy in the relationship between the imposter phenomenon and academic achievement

Research Questions

- How does the Imposter Phenomenon influence academic achievement among students?
- To what extent does self-efficacy moderate the relationship between imposter phenomenon and academic achievement?

LITERATURE REVIEW

Impostor phenomenon, self-efficacy, and academic achievement are closely related psychological constructs that can significantly impact a person's success and well-being, particularly in educational settings.

Imposter Phenomenon

The fundamental cause of the imposter phenomenon is an inability to accurately evaluate oneself, considering performance. Furthermore, it is well recognized that a decline influences imposter proneness in self-belief and confidence. Research has noted gender and racial differences in the imposter phenomenon. Specifically, females tend to examine imposter phenomenon at higher rates than men, even as much as double the rates (Cokley et al., 2013). Impostor is usual among nursing students who have initial stage of their careers or convert from clinical practice to education. This phenomenon can badly affect mental health and professional growth. This study shows that people experiencing imposter feelings may endure depression, stress, and low self-confidence (El-Ashry et al., 2024). Feelings like fraud and your accomplishments are not truly yours are common, not only as a crisis of confidence but also as a rationality issue.

Preserving this erroneous belief becomes a crucial objective. Others who view impostors as achievers perceive an opportunity for improvement and give them additional responsibility with the assurance that the work will be ideal. There is a significant amount of fear that is frequently linked to an emphasis on handling impressions and self-observation behaviours due to a lack of personalization of prior successes, an external locus of control, a lack of confidence in replicating prior performance, and the acceleration is evident (Sakulku, 2011). IP is seen as debilitating self-distrust, which frequently leads high achievers to blame their success on chance or other circumstances. Unusual performance, innovation, and competitiveness are necessary for high-achieving productions, which promote an ongoing quest for

excellence. In such target-driven environments, IP may be appropriate when there is a strong need to attain high standards.

Self-efficacy

Self-efficacy is fixed as a person's notion of their ability to correctly follow through a strategy required to reach a finish. It is a key element of societal cognitive theory and has been extensively analysed in pedantic circumstances (Medline et al., 2022). Self-efficaciousness influences task option, exertion, persistence, and resiliency in facing obstacles. Individuals who have high self-efficacy are more likely to set difficult goals, persist in the face of difficulties, and achieve academic success. They are also more likely to engage in self-regulatory behaviours, such as effective study strategies and time management. In contrast, students with low self-efficacy may avoid challenging tasks, quit easily, and underperform academically. Students' self-efficacy views also influence how much effort they will put into a task and how long will they stick to it; the more self-efficacious they feel, the more effort and perseverance they will put out (Yamini & Mandanizadeh 2011).

Academic Achievement

Academic achievement refers to success in educational settings, such as grades, test scores, and overall academic performance. It is affected by various factors, including cognitive abilities, motivation, study habits, and environmental factors. Studies have consistently found a negative interaction between impostorism and academic achievement. People with high impostor phenomenon scores tend to underperform academically compared to their peers with similar abilities. This could be because imposter syndrome has a detrimental impact on motivation, tenacity, and self-efficacy (Wells, 2011). People who perceive oneself as imposters consistently reveal interrupted goal journey and poor result in academic settings. Conversely, self-efficacy has been positively related to academic achievement. This research thus gives proof that many of the success-driven behaviours that individuals who experience impostor feelings involve in are encouraged by the requirement to look clever to others and are shaped by an overrule worry with others' image (Langford & Clance, 1993). Students with high confidence are more suited to hard targets, are stable in times of problems, and achieve academic success. Self-efficacy can also mitigate the negative effects of imposter syndrome on academic performance. In summary, imposter phenomenon, self-efficacy, and academic achievement are closely related constructs that can significantly influence a person's success and well-being in educational settings. Interventions to reduce imposter phenomenon and enhance self-efficacy may help improve student well-being and academic performance.

Theoretical Framework of Imposter Phenomenon, Self-Esteem and Academic Achievement

Imposter Phenomenon

The term Imposter Phenomenon was coined by Clance and Imes (1978) to describe the quality and behaviour of a group of accomplished people who struggled to integrate their accomplishments. Despite their achievements and accolades, these women experienced emotions of deception since they did not attribute their achievements to their intended potential. Even though they may appear harder to evaluate than technical proficiency alone, a wide range of human qualities are increasingly acknowledged as crucial to doctors' mental health, welfare, and ability to avoid burnout. On the other hand, characteristics like impostorism and dysfunctional perfectionism have been linked to a higher incidence of detrimental mental health outcomes. The mental, intellectual, emotional, and experiential aspects of which ones occur about no cross actual ability yet, because of having been fortunate, having functioned more earnestly, or having twiddled others' feelings, has been labelled the imposter phenomenon (Clance & Imes, 1978).

Self-Concept Theory

A person's self-concept consists of the orderly set of ideas, opinions, and attitudes regarding the world and existence. It presents the individual's perception of themselves and therefore serves as the system of

guiding one's actions and assignments (Rosenberg, 2017). A person's behaviour significantly influences their self-image, or how they see themselves, their abilities, and other distinguishing characteristics. Self-awareness or self-perception involves controlling an individual's motives, attitudes, and behaviours (Hartung, 2020). The self-concept is an active process of reorganizing and integrating that which is determinable about the self, asserts, rather than a passive compilation of attributes. This viewpoint would be significant in defining how people relate with others in social contexts, for there would be self-perception of how a person regards themselves and how they perceive others are doing so too. Carl Rogers, an eminent psychologist, postulated that self-concept consists of three major components: Self-identity is the term used to describe a person's evaluation of their unique traits, values, and qualities, including their convictions and temperament (Drummond, 2021). Self-esteem indicates the link between a person's worth and how much they regard and cherish themselves. Factors that influence self-esteem include a person's self-image and their roles in society. Self-efficacy is the conviction that one can do a task and be successful. This is one of the central concepts defining the individual's perception of his competence and ability to succeed in education, performance, and career. More than this, it is concerned with the extent of motivation, the persistence level, and the willingness to face challenges. Self-knowledge deals with knowledge that focuses on the state of the person's mind. There is a preference for 'good news' and sensitivity to sound feedback.

Hypothesis Development

Imposter Phenomenon

Imposter Phenomenon (IP) is a psychological formula where soul doubt their acquisition, endowment, or accomplishment and give birth to a relentless internalized fear of being queer as "fake." It is a subjective sense of intellectual dishonesty and self-doubt that people in high achieving, goal-oriented jobs endure (Siddiqui et al., 2024).

Academic Achievement

Students with IP often set lower academic goals because they believe they cannot achieve higher success. This self-imposed limitation can prevent them from reaching their full potential.

H₁: Imposter Phenomenon and academic achievement are inversely correlated; worse academic achievement is linked to higher levels of Impostor Phenomenon.

Self-Efficacy as a Moderator

An Imposter Phenomenon, first depicted by Clance and Imes (1978), is described by tireless identity uncertainty, deficiency, and the powerlessness to incorporate one's accomplishments. People unable to embrace success frequently attribute their prosperity to outside elements like karma, timing, or others' misjudgement of their capacities. Understanding the connection between these two factors is pivotal for tending to the adverse results of an inability to embrace success and cultivating a more secure and useful outlook through upgrading self-efficacy. This paper investigates the exchange between a failure to acknowledge success and self-adequacy, explaining how they impact one another and the ramifications of this relationship for individual and scholarly outcomes. Self-efficacy theory postulates that different modes of influence alter coping behaviour by creating and strengthening expectations of personal efficacy. According to this formulation, perceived efficacy can affect behaviour in several ways. It influences choice of activities and environmental settings (Bandura, 1978). People with a high sense of self-worth will undoubtedly set goals for their tests, persevere through difficulties, and advance. Conversely, those with low self-efficacy will often stay away from problems, surrender effectively, and fail to meet expectations.

The relationship between the Imposter Phenomenon and Academic Achievement among college students. Specifically, we aim to investigate how feelings of impostorism impact students' academic performance, psychological well-being, and overall college life in populations of students. By understanding this relationship, we strive to identify potential interventions or support mechanisms to help students mitigate the negative effects of impostor feelings and foster a more positive academic

environment. Since, actual performances are concrete representations of people's skills, they offer the most trustworthy data for evaluating self-efficacy (Schunk & Pajares, 2004).

H₂: Self-efficacy moderates the connection between Imposter phenomenon and academic Achievement.

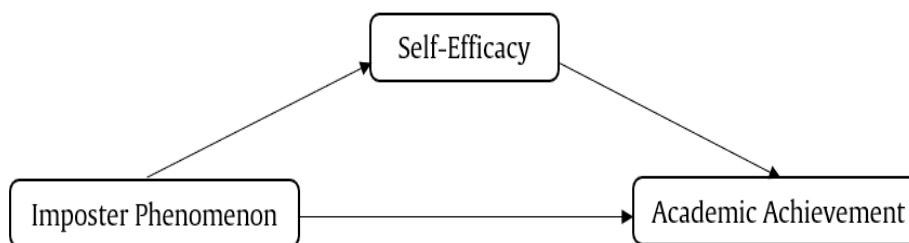


Fig.1. Conceptual Model

METHODOLOGY

Participants and Procedure

The total sample size was 330 male and female students aged 16 to 30, who were not undergoing any psychological disorder. This questionnaire was meticulously designed to include validated measures of Imposter Phenomenon, self-efficacy, and academic achievement. By utilizing established scales and metrics, we aim to uphold the data's reliability and validity, thus ensuring our findings' robustness. Convenience sampling was selected because it provides broad insights into a phenomenon of interest. This study was conducted with the consent of some private universities alongside various institutes to ensure a variety of information is gathered. Before the interview, the members were informed they could pull out anytime, assuming they felt uncomfortable. Our research employed a multifaceted survey method to collect and analyze data on the imposter phenomenon among university students. Our methodology encompasses quantitative techniques to comprehensively understand this intricate psychological construct. Participants were informed that participation was voluntary and that the researcher would keep all responses private. No report or publication about this study included the identities of the participants. The investigators briefed the participants on the overall goal of the study as well as the time and effort requirements. The data gathering process was partitioned into two methodologies: a web survey, which was distributed through online platforms and requested to fill out, and a face-to-face interview, in which we led a brief meeting with the client and asked them to fill out the survey.

Measures

Impostor Phenomenon

A person who feels like a fraud but is perceived as successful by society's external standards is said to be experiencing the impostor phenomenon. The origins of the impostor phenomenon construct are rooted in Clance and Imes's therapy work with more than 150 accomplished, mostly White women who felt like impostors and undervalued their accomplishments (Rackley et al., 2024). Individuals exhibiting the impostor phenomenon believe that they are, in some way, inadequate. They work hard to succeed but never feel satisfied because of their perceived shortcomings. They may view their everyday activities as a "performance" in which they put on a show of expertise (Roskowski, 2010). The impostor phenomenon, which is the term for this sense of deception, has been linked to anxiety and depression. Our study utilized various standardized scales, such as the Clance IP scale. The Clance Sham Impostor Phenomenon Scale (Clance, 1986), comprising 20 items, has shown high unwavering quality, with Cronbach's alpha from 0.84 to 0.96. It is very much approved for estimating the Impostor Phenomenon. Impostor Phenomenon ought to encourage us to choose a view of our own value that is more closely linked to characteristics like intellectual humility than to relative skill (Slank, 2019).

Academic Performance

Academic performance typically refers to measurable indicators such as grades, test scores, completion rates, or other quantitative measures used to assess a student's achievement in educational settings. This definition enables researchers and educators to specify how they measure academic performance, ensuring consistency and comparability in studies and assessments. The second scale was the Academic Performance Scale by Birchmeier et al., (2015). It incorporates eight explicit items defined in their examination, with revealed legitimacy and dependability information.

Self-Efficacy

Self-efficacy is the level of assurance an individual has in their ability to accomplish specific tasks or handle possible circumstances. The belief that students have in their ability to succeed academically and to self-regulate their learning is known as self-regulation efficacy. The final scale was General Self-Efficacy Scale containing 10 items, shows solid legitimacy and unwavering quality, with Cronbach's alpha somewhere in the range of 0.76 and 0.90, and incorporates items such as "If I put in enough effort, I can always solve challenging situations," and "If someone is against me, I can discover the means and ways to accomplish what I desire." We used a Likert scale in our survey research in which people could express their opinions in terms of ordinal level categories that are ranked along a continuum. To facilitate data collection, we implemented comprehensive online forms, allowing for convenient and efficient participation from students across diverse demographics and geographical locations. This digital strategy not only refines the data collection process but also intensifies attainability and comprehensiveness.

RESULTS & FINDINGS

Table 1 describes It gives in-depth demographic breakdowns about a sample size of 330 participants according to gender, educational level, and marital status. Regarding gender, males constitute 36.7% of 121 individuals, while females account for 63.3% or 209 individuals. Regarding education level, most respondents, representing 52.4% or 173 individuals, hold an undergraduate degree. Those up to intermediate education level represented 20.3%, about 67 individuals; postgraduates got 21.8%, about 72 individuals. Only a minority of respondents, 5.5% or 18 individuals, hold a graduate degree. On marital status, singles comprise the largest portion, 61.5% or 203 individuals. Married participants comprised 26.4% or 87 individuals, while those committed were at 4.5% or 15 individuals, engaged individuals at 6.4% or 21 individuals, and a small fraction of 1.2% or four individuals divorced.

Table 1
Demographic Statistics of Respondents

Category	Subcategory	Frequency	Percent
Gender	Male	121	36.7
	Female	209	63.3
Education	Undergraduate	173	52.4
	Intermediate	67	20.3
	Post Graduate	72	21.8
	Graduate	18	5.5
	Single	203	61.5
Marital Status	Married	87	26.4
	Committed	15	4.5
	Engaged	21	6.4
	Divorced	4	1.2
Total		330	100.0

Table 2 describes the dataset under consideration is denoted by three variables-Imposter Phenomenon, Academic Achievement, and Self-Efficacy, and has a valid sample size of 330. The mean scores helped reveal the average of Imposter Phenomenon, which was 28.71, while Academic Achievement, with an average less than that, of 18.06, and Self-Efficacy, with a mean of 26.72. The standard deviations show

the variability in the data; Imposter Phenomenon has a standard deviation of 5.69, while Academic Achievement stands next at 5.00 and Self-Efficacy at 6.30.

Table 2
Descriptive Statistics

	Imposter Phenomenon	Academic Achievement	Self-Efficacy
Mean	28.7091	18.0636	26.7212
Std. Deviation	5.69383	5.00081	6.30008
Minimum	15.00	8.00	10.00
Maximum	50.00	39.00	40.00

Table 3 describes the score of 0.551 on Cronbach's Alpha for the Imposter Phenomenon scale indicates moderate internal consistency among the ten items. The Cronbach's Alpha of Academic Achievement is .662. It gives acceptable reliability. The Self-Efficacy scale shows good internal consistency, as shown by its Cronbach's Alpha score of 0.838. This implies that the ten items adequately measure a single concept.

Table 3
Descriptive Statistics and Reliability Analysis of the Measures of the Study

Variable	Cronbach's Alpha	Number of Items	Mean	Variance	Standard Deviation
Imposter Phenomenon	0.551	10	28.71	32.420	5.694
Academic Achievement	0.662	8	18.06	25.073	5.007
Self-Efficacy	0.838	10	26.72	39.691	6.300

Table 4 describes that the Imposter Phenomenon and Academic Achievement revealed a marginally negative correlation ($r=-0.105$, $p=0.057$) where increased feelings associated with the Imposter Phenomenon tend to be weakly correlated to lower academic performance. However, Academic Achievement and Self-Efficacy again correlated poorly at $r=-0.052$, $p=0.348$, which means Self-Efficacy is significantly unrelated to Academic Achievement in this sample. On the other hand, a positive association was shown between Imposter Phenomenon and Self-Efficacy, which is significant ($r=0.240$, $p<0.001$), indicating that higher levels of Imposter Phenomenon in an individual will also report higher levels of Self-Efficacy.

Table 4
Correlation Analysis

Variables	Pearson Correlation	Sig. (2-tailed)	N
Imposter Phenomenon & Academic Achievement	-0.105	0.057	330
Academic Achievement & Self-Efficacy	-0.052	0.348	330
Imposter Phenomenon & Self-Efficacy	0.240	0.000	330

Table 5
Conditional Effects of Imposter Phenomenon at Various Levels of Self-Efficacy

Self-Efficacy	Effect (b)	SE	t	p
21.00	.01	.06	.19	.84
26.00	-.07	.05	-1.36	.17
33.00	-.18	.06	-2.92	<.01

Table 5 describes that Self-efficacy does not moderate the relationship between impostor phenomenon and Academic Achievement.

Additional Findings

Our study found a complicated association between imposter syndrome and self-efficacy; an increase in self-efficacy appeared to be correlated with a rise in impostor sentiments. This study explored the connection between feeling unworthy of success (IP), Self-belief, and academic performance to comprehend their impact on students' behaviour and achievement. Our findings provide valuable insights into how these psychological constructs interact and influence educational outcomes. The outcomes

show an adverse connection between Impostor Phenomenon and academic performance ($r = -0.015$, $p = 0.057$), indicating that higher levels of impostor feelings tend to be weakly linked with lower learning performance. This shows that learners who experience stronger impostor feelings may struggle with their academic achievements, although the correlation was not strong. On the other hand, the connection between academic performance and self-belief was poor ($r = -0.052$, $p = 0.348$), indicating that self-belief is not significantly related to academic performance in this sample. This result contrasts with the general belief that higher self-belief shows stronger academic outcomes, suggesting that other factors may be more influential in this context.

Interestingly, there was an important positive connection between the Impostor Phenomenon and self-efficacy ($r = 0.240$, $p < 0.001$), suggesting that people with high impostor feelings also reported higher levels of self-belief. This finding highlights the complexity of the relationship between these constructs, as individuals with impostor feelings may still possess a strong belief in their ability to perform tasks. One possible explanation is that those with increased self-efficacy are more aware of their strengths and successes, prompting them to compare more closely with others and feel pressure to achieve, thereby affecting self-perception. The finding indicates that self-efficacy is normally associated with positive results; however, under this very scenario, it adds to some of the impostor psychological damages, shedding light on the fact that perceptions about oneself may become very complex in professional or personal situations. Those with a high self-efficacy may still compare themselves to peers they perceive as even more competent or successful. This comparison can trigger feelings of incompetence, leading to a heightened sense of being an “imposter,” even when their self-efficacy suggests they are capable.

Discussion

The result of this study both supports and contradicts previous research. As in other research, there was a negative correlation between academic achievement and the Impostor Phenomenon (IP), suggesting that lower performance is typically associated with greater impostor sentiments (Cokley et al., 2015). However, previous studies frequently discovered stronger connections; this relationship in the current study was extremely weak and non-significant ($r = -0.015$, $p = 0.057$). Cultural considerations, the academic setting, or mitigating influences like resilience and peer support could cause this discrepancy. Contrary to previous findings, the study discovered no substantial positive correlation between academic achievement and self-efficacy. Although self-efficacy was found to be a significant predictor of academic achievement by Bandura et al. (1996). The association in this case was only marginally negative ($r = 0.052$, $p = 0.348$). This implies that the sample's high levels of self-belief might not have translated into improved grades due to overconfidence, poor study techniques, or outside influences. The link between IP and self-efficacy represents a significant divergence from the literature. The current analysis discovered a substantial positive association ($r = 0.240$, $p < 0.001$). This paradox might reflect high-achieving students who have a strong sense of self-worth but feel like impostors, attributing their achievement to outside forces or contrasting themselves with their outstanding peers. Overall, the findings indicate a potential complexity in the relationship between IP, self-efficacy, and academic accomplishment that calls for future research in various academic and cultural contexts.

CONCLUSION

This study's findings provide crucial information on the relationship between academic achievement and the impostor phenomenon, revealing a remarkable negative correlation. The study examines how self-efficacy may act as a moderator in the relationship between academic success and the impostor phenomenon. Yet, the results indicate that self-efficacy does not moderate academic achievement and the impostor phenomenon. This research also exposed another finding that individuals with higher Impostor Phenomenon also experienced higher levels of self-efficacy. It also indicated the need for further research into other possible moderating factors that can help decrease the negative impact of the impostor phenomenon, mostly among students who explore it completely.

Theoretical and Social Implications

The results revealed a complicated connection between the impostor phenomenon and self-efficacy. This complexity questions the long-held values linking high self-efficacy with positive outcomes. Researchers may have to adjust the self-efficacy theories to accommodate the paradox of individuals who feel able yet feel like impostors. The conceptual model of the Impostor Phenomenon has to evolve beyond being just about deficits in self-beliefs, and the motivations and pressure that energize such sentiments in high-achieving individuals. Recognizing that students who experience the impostor phenomenon may concurrently exhibit elevated levels of self-efficacy, it is argued that enhanced sensitivity and targeted support are needed in educational settings. Teachers and mental health practitioners can create interventions and workshops that address academic competencies and emotional health.

Limitations and Future Directions

The psychological factors, like the Impostor Phenomenon and self-efficacy, were assessed through standardized instruments that cannot fully capture the intricacies of personal experiences and emotions. Furthermore, we did not control for external factors like family support, financial stress, or societal pressures that may impact students' behaviour. The short period of the study is also a limitation since it may not be able to reflect long-term psychological changes. Finally, our study did not test any specific solutions to reduce the Impostor Phenomenon, which provides space for practical interventions in future research. External factors, like family and social support, financial stability, and academic pressure, should be investigated by researchers to determine how they influence the impostor phenomenon.

Using a mixed-method approach that combines surveys with interviews can be very useful in going deeper into personal experiences. Future studies should also test targeted intervention programs, such as mentorship, peer support groups, and resilience training, and whether they reduce self-doubt. Combining surveys with interviews, a mixed-method approach could provide deeper insights into personal experiences. Future studies should also test targeted intervention programs, such as mentorship, peer support groups, and resilience training, to assess their effectiveness in reducing Self-doubt. Conducting long-term studies would help understand how the Impostor Phenomenon evolves. In addition, exploring digital tools, such as mobile apps or online platforms, offers self-help materials for the students. Lastly, future studies should focus on how cultural norms and beliefs impact self-doubt, which helps develop culturally sensitive strategies to address the Impostor Phenomenon.

Competing Interest

The authors declare no conflict of interest.

Authors' Biography

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