

# Understanding Imposter Syndrome: A Correlational Analysis Of Achievement Motivation, Parental Bonding, And Perceived Social Support

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**Citation:** Varsha K, et al (2024), Understanding Imposter Syndrome: A Correlational Analysis Of Achievement Motivation, Parental Bonding, And Perceived Social Support, *Educational Administration: Theory and Practice*, 30(4), 9074 - 9080

Doi: 10.53555/kuev.v30i4.3028

## ARTICLE INFO

## ABSTRACT

Clance and Imes (1978) came up with the term imposter phenomenon which refers to persistent feelings of self-doubt in one's achievements which was mostly seen in high-achieving individuals. This study investigates the relationships among Imposter Phenomenon (IP), Achievement Motivation, Parental Bonding, and Perceived Social Support in a sample of 251 individuals (108 males and 143 females) in India. Using Pearson correlations, the study explores how these factors relate to one another and what implications they have for understanding imposter syndrome. The results reveal a significant positive correlation between Imposter Phenomenon and Achievement Motivation ( $r = 0.549$ ,  $p < 0.01$ ), indicating that individuals with higher achievement motivation are more likely to experience imposter syndrome. This suggests that high-achieving environments might contribute to feelings of self-doubt and fraudulence. Parental bonding and the impostor phenomenon do not significantly correlate ( $r = -0.017$ ), suggesting that parental interactions may not play a substantial role in imposter syndrome. Similarly, there appears to be no evidence that social support has a major effect on impostor syndrome based on the weak and non-significant correlation ( $r = -0.105$ ) between the imposter phenomenon and perceived social support. Hence, future results need to delve deeper into the other underlying causes of the imposter phenomenon, examining personal, cultural, and organisational factors that might contribute to this phenomenon. Understanding the root causes can help develop more effective strategies and interventions to reduce imposter syndrome's impact, especially in high-achieving environments.

**Keywords:** impostor syndrome, parental bonding, achievement motivation, perceived social support

## Introduction

The term "Imposter Phenomenon" (IP) also known as Imposter Syndrome refers to the emotions that a person has when they legitimately reach a certain degree of accomplishment but do not believe they are worthy of it. It was first described by psychologists Suzanne Imes, PhD, and Pauline Rose Clance, PhD, in the 1970s (Clance & Imes, 1978). They initially observed this phenomenon among high-achieving women but later recognized its prevalence across genders, professions, and demographic groups. People who experience it often feel like they are not capable in their jobs, or they might have accomplished things due to external factors such as luck, fluke, knowing the right person, being at the right place, or personal charm, rather than their skills (Clance & Imes, 1978). This results in people feeling like they might get exposed as a "fraud". Even though Imposter Syndrome is ubiquitous and causes anxiety and depression, it is not classified as a psychological disorder in the DSM.

### **Imposter Syndrome and High Achievement Motivation**

Studies show that there is a direct relationship between the need for high achievement and imposter syndrome in individuals (Singh, 2019). Imposter syndrome is more seen in high-achieving fields like science, technology, engineering, and mathematics (STEM) fields among faculty, post-doctorate, and PhD individuals, which could be due to peer comparison, faculty evaluation, public recognition, the anticipatory fear of not knowing, and a perceived lack of competency (Chakraverty, 2022). Although the victims of imposter syndrome are highly

driven, they are secretly concerned that others will eventually find out that they lack certain information and abilities (Jöstl et al., 2012). However, few studies show university students with high IP scores and those with low IP scores have similar academic results (Gibson-Beverly & Schwartz, 2008; Yaffe, 2021). These results imply that feelings of IP are not exclusive to underachievers.

Nonetheless, university students with high IP scores are less likely to have high hopes for their future accomplishments and are more likely to suffer from academic test anxiety (Cusack et al., 2013; Ross et al., 2001). Excessive pressure to meet high self-imposed standards is another factor that increases the likelihood of having IP in individuals (Thompson et al., 2000). Even though individuals with IP are unable to internalise their accomplishments, they may have high standards for achievement or may feel a lot of pressure from significant people to achieve which results in persistent fear of failing (Kolligian Jr. & Sternberg, 1991).

Thus, the imposter phenomenon can be said to be prevalent among high achievers. Moreover, individuals with IP are likely to have low hope for success in their achievements and likely to have high fear of failure in their tasks.

### ***Imposter Syndrome and Parental Bonding***

The four early family factors that can lead to the development of IP include: a) learning early on that being smart is the family's first command; b) having interests or achievements different from the family members; c) receiving feedback or praises from the family that do not match with the feedback received from other sources and d) receiving little praise from parents (Clance, 1986). Imposter Phenomenon is negatively correlated to family cohesion and expressiveness and positively correlated with family conflict and family control in the family environment scale. However, the correlation between them is not strong (Bussotti, 1990). Imposter syndrome in adolescents and adults has been associated with several marital conditions, such as maladaptive parenting, alcoholism in the home, and specific parenting approaches (Caseiman, Seif & Self, 2006; Castro, Jones & Mirsalimi, 2004; Cusack et al., 2013; Robinson & Goodpaster, 1991). Another study reveals that perceived parental overprotection and carelessness are weakly correlated to imposter syndrome among British students (Sonak and Towell 2001). Parental care and overprotection increase or decrease the level of self-esteem in individuals, thereby influencing the feelings of imposter syndrome in individuals (Yaffe, 2020).

Overall, there has been very little and inconsistent empirical study on the relationship between parenting styles and the imposter phenomenon and the correlation between them is not strong.

### ***Imposter Syndrome and Perceived Social Support***

Social support helps in coping with feelings of imposter syndrome (Snipes, 2023). Social support can be defined as the perception of receiving affection, support, and care from other group members (Cobb, 1976). According to studies, significant others in the group may provide a perceived sense of social support that acts as a psychological buffer in stressful situations (Bhagat et al., 2012; Sia et al., 2013). This helps individuals maintain appropriate psychological functioning by promoting good mental health (Bolger & Amarel, 2007; Sia & Bhardwaj, 2008). When not supported and applied effectively, it can also serve as a maladaptive coping mechanism (Lazarus and Folkman, 1984; Sreelekha & Sia, 2022). According to studies, emotional and social support from friends and significant others is crucial for controlling feelings and thoughts associated with impostor experiences and thoughts (Hutchins et al. 2019). However, studies suggest that the relationship between social support and the impostor phenomenon is not significant (Pervez et al. 2021).

### **Hypotheses**

1. There is a positive correlation between Imposter Phenomenon and Achievement Motivation.
2. There is a negative correlation between Imposter Phenomenon and Parental Bonding.
3. There is a negative correlation between Imposter Phenomenon and Perceived Social Support.

### **Research Methodology**

#### **Research Design**

Pearson's Correlation is used to examine the relationship between imposter phenomenon and other variables including achievement motivation, parental bonding, and perceived social support.

#### **Participants**

261 individuals both male and female from various backgrounds who are undergraduate, post-graduate, PhD students and working professionals from India were taken for the study. 251 participants were selected after removing the outliers. The total number of males was 108 and females were 143. A convenient sampling method was used to choose participants for the study.

## **Materials**

### ***Impostor Phenomenon***

The participants' impostor sentiments were measured in the current study using the Clance Impostor Phenomenon Scale (CIPS; Clance, 1985). The measure evaluates feelings of being fake, fear of failing despite past achievements, and the belief that luck plays a role in success. With a 5-point Likert-type scale ranging from 1 (not at all true) to 5 (extremely true), it is a 20-item measure. A Cronbach's alpha coefficient of .96 was found.

### ***Achievement Motivation***

A reduced version of the Achievement Motivation Scale adapted from Lang, J.W.B. and S. Fries (2006) was used in the study. Initially, the scale had 30 items and later was revised into 10 items. This scale contains 10 items measuring two subscales: Items 1-5 measure "hope of success" (approach tendency) and Items 6-10 measure "fear of failure" (avoidance tendency). The internal consistency of the scale is higher than 0.70.

### ***Parental Bonding***

The modified version of the Parental Bonding Instrument consisting of 12 items is used to measure parental bonding (Parker et al., 1979). Initially, the scale contained 25 items and later was modified into 12 items. This scale consists of two subscales which are care and overprotection each containing 6 questions. Using a 4-point Likert-type scale, ranging from 1 (very unlikely) to 4 (very likely), respondents evaluate the actions and attitudes of each of their parents in retrospect.

### ***Perceived Social Support***

The Multidimensional Scale of Perceived Social Support is used in the study to measure perceived social support in the respondents (Zimet et al., 1988). Initially, the scale had 24 items and later was modified into 12 items containing different subscales such as relationships with family, friends, and significant others. Each of these subscales includes 4 items. Each item is rated on a 7-point rating scale ranging from 1 (very strongly disagree) to 7 (very strongly agree). The values were .91, .87, and .85 for the Significant Other, Family, and Friends subscales, respectively. The whole scale's reliability was .88. These numbers show that both the scale and its three subscales have strong internal consistency.

## **Procedure**

Individuals of various backgrounds are voluntarily invited to take part in the study. Initially, they are given some basic idea about the research study so that they can make an informed decision to take part in the study. After receiving their consent, they are given a Google survey consisting of the above-mentioned scales. The survey also contains a demographics section where participants reported their age, sex, race/ethnicity, socio-economic status, year in university professional status and educational qualification. The entire testing procedure took about 15-20 minutes. Moreover, they are also informed that their data would be kept confidential and that participating in the study would not expose them to any dangers or negative outcomes for themselves or others. Subsequently, the received responses are scored and interpreted for further analysis.

## **Data Analysis**

The IBM SPSS version 26 statistics package and Excel were used to study the variables including descriptive analysis and correlations.

## **Results and Discussion**

### **Overview of Variables**

#### ***Achievement Motivation***

This variable represents the drive or ambition individuals must achieve success, complete goals, and attain excellence. A higher mean for this variable would suggest that, on average, the group has a considerable level of motivation to achieve.

#### ***Imposter Syndrome***

This variable measures the extent to which individuals feel like a fraud or doubt their achievements, attributing success to luck rather than skill or competence. A high mean would indicate that, on average, the group experiences a significant level of imposter syndrome.

#### ***Parental Bonding***

This variable relates to the perceived emotional connection and support received from one's parents. A higher score might indicate stronger parental bonding, suggesting a nurturing upbringing.

#### ***Perceived Social Support***

This variable reflects the degree to which individuals believe they have a network of social support. A higher mean indicates that, on average, the group perceives considerable support from their social circles.

## **Descriptive Statistics Analysis**

The descriptive statistics provided in Table 1 give a snapshot of the central tendency and dispersion of these variables within a group of 251 participants.

### ***Imposter Syndrome***

The mean for imposter syndrome is 62.27, with a standard deviation of 14.880. This is a relatively high mean, indicating that on average, participants tend to experience moderate to significant levels of imposter feelings. This standard deviation indicates significant variability, with a wide range of imposter syndrome experiences within the group. The high spread suggests diverse perceptions of self-doubt among participants.

### ***Achievement Motivation***

The mean is 36.69, with a standard deviation of 5.139. This suggests that, on average, suggests that participants generally have a relatively high level of achievement motivation, indicating a tendency toward goal-oriented behaviour. The standard deviation is relatively low suggesting less variability in achievement motivation among the participants. This could indicate that most participants fall within a narrower range of motivation.

### ***Parental Bonding***

The mean for parental bonding is 29.35, with a standard deviation of 3.869. This suggests that, on average, participants report a relatively positive parental bond, suggesting that most have a moderate to high level of parental support and involvement. This standard deviation is also relatively low, indicating less variability in the perception of parental bonding among participants. This suggests that most individuals report similar levels of parental support.

### ***Perceived Social Support***

Total perceived social support has a mean of 15.6454 on a potentially similar scale, suggesting that on average, participants report a moderate level of social support, indicating that they generally feel supported by their social networks. Total Perceived Social Support has a standard deviation of 3.49632, which indicates that the variability in perceived social support is moderate, with most individuals reporting similar levels of social support.

## **Potential Relationships and Implications**

Considering these statistics, below are some potential interpretations and implications.

### ***Achievement Motivation and Imposter Phenomenon***

Higher achievement motivation might increase imposter feelings, as individuals with high motivation often set high standards for themselves and might feel unworthy of their achievements. However, motivation can also drive individuals to succeed despite their doubts. The relationship between achievement motivation and imposter syndrome may be complex. Employers and educators should consider that high-achieving individuals may require additional support to manage imposter syndrome.

### ***Parental Bonding and Imposter Phenomenon***

Strong parental bonding may provide a sense of security and validation, potentially reducing feelings of imposter syndrome. Conversely, weak parental bonding could lead to doubts about self-worth, contributing to imposter feelings. A supportive family environment could act as a protective factor against imposter syndrome. This highlights the importance of family support in building self-confidence and a positive self-image from an early age.

### ***Perceived Social Support and Imposter Phenomenon***

High levels of perceived social support could mitigate imposter syndrome by providing reassurance, feedback, and encouragement. A lack of social support might intensify feelings of isolation and self-doubt. Building strong social networks can be instrumental in addressing imposter syndrome. This suggests that fostering communities and encouraging social connections in workplaces and academic settings could be beneficial. In summary, the descriptive statistics indicate a group with considerable achievement motivation and perceived social support, yet also a high level of imposter syndrome. These insights can guide further exploration, such as examining correlations to better understand the relationships and underlying causes of these dynamics.

## **Major Findings**

The key findings from the table 2 are as follows:

### ***Positive Correlation Between Imposter Phenomenon and Achievement Motivation***

The correlation coefficient between Total IP Score and Total Achievement Motivation is 0.549, significant at the 0.01 level. This strong positive correlation suggests that individuals with higher imposter syndrome scores tend to have higher achievement motivation. This relationship could imply that people experiencing imposter

syndrome may strive to achieve more to compensate for their feelings of inadequacy. Alternatively, individuals with high achievement motivation might experience greater pressure, contributing to imposter syndrome. Thus, there is a strong positive correlation between the impostor phenomenon and achievement motivation. Hence, the first hypothesis is accepted.

### ***Negative Correlation between Imposter Phenomenon and Parental Bonding***

The correlation coefficient between Total IP Score and Total Parenting Bonding is  $-0.017$ , which is not significant, suggesting almost no relationship between these variables in this dataset. This lack of correlation suggests no meaningful relationship between imposter syndrome and parental bonding. The absence of a significant correlation indicates that other factors may play a more substantial role in contributing to imposter syndrome. Thus, the findings do not align with the second hypothesis and hence can be rejected.

### ***Negative Correlation Between Imposter Phenomenon and Perceived Social Support***

The correlation coefficient between Total IP Score and Total Perceived Social Support is  $-0.105$  which is not significant. This weak negative correlation indicates that individuals with higher imposter syndrome scores tend to perceive slightly lower social support, but the relationship is not statistically significant. Although the relationship is not significant, the trend suggests that stronger social support might help reduce imposter syndrome. This could imply that other factors, like individual personality traits or workplace culture, may play a more significant role in contributing to imposter syndrome. Thus, the third hypothesis can be rejected as the relationship is not statistically strong enough to draw any definite conclusions.

These findings shed light on the relationships between imposter syndrome, achievement motivation, parental bonding, and social support. The significant positive correlation between imposter syndrome and achievement motivation suggests that high-achieving environments may contribute to imposter syndrome, while the lack of strong correlations with parental bonding and social support suggests that other underlying factors could influence the impostor phenomenon.

### **Implications**

Understanding the implications of correlations among variables like Imposter Phenomenon (IP), Achievement Motivation, Parental Bonding, and Perceived Social Support helps identify key areas of focus for interventions, support programs, and further research. The implications below are derived from the key findings discussed earlier.

### ***Positive Correlation Between Imposter Phenomenon and Achievement Motivation***

The positive correlation indicates that environments that emphasize high achievement may contribute to imposter syndrome. This could be due to high expectations, fear of failure, or pressure to constantly meet high standards. This suggests the need for supportive workplace and educational cultures that balance achievement with recognition and psychological well-being.

### ***Weak Correlation between Imposter Phenomenon and Parental Bonding***

Since parental bonding does not appear to significantly affect imposter syndrome, other factors like workplace dynamics, peer influence, or personality traits could play a more substantial role. This finding suggests that interventions to address imposter syndrome might be more effective when focusing on factors other than parental relationships.

### ***Weak Correlation between Imposter Phenomenon and Perceived Social Support***

Despite the weak negative correlation, it could indicate that higher social support might slightly reduce imposter syndrome, even if the relationship is not significant. This highlights the potential benefits of fostering social networks and providing mentorship and support systems to help mitigate imposter syndrome.

Overall, these implications suggest that imposter syndrome is significantly related to achievement motivation but not strongly related to parental bonding and perceived social support. This suggests that addressing imposter syndrome should focus on other factors such as workplace culture, leadership styles, personal traits, perfectionism, self-criticism, self-efficacy, or social pressures as they might contribute to impostor syndrome. Further research could investigate these additional factors that may develop feelings of imposter syndrome in individuals and develop comprehensive strategies and interventions to overcome it.

### **Conclusion**

The study examines the relationship between the Imposter Phenomenon (IP) and various variables including Total Achievement Motivation, Total Parental Bonding and Total Perceived Social Support. A significant positive correlation between Imposter Phenomenon and Achievement Motivation suggests that high-achieving individuals are more prone to imposter syndrome. Weak negative correlations between the Imposter Phenomenon and both Parental Bonding and Perceived Social Support indicate that these factors may play a minor role in imposter syndrome. This finding suggests that addressing imposter syndrome may require a focus

on other contributing factors such as workplace culture, personal traits, or educational environments. The study's implications point toward a comprehensive approach to combating imposter syndrome, emphasizing mentorship, social support, recognition, and a positive culture. Future research could explore additional factors that contribute to imposter syndrome and investigate effective interventions to help individuals build confidence and reduce self-doubt.

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**Table 1** Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Total IP Score	251	19	100	62.27	14.880
Total Achievement Motivation	251	18	50	36.69	5.139
Total Parenting Bonding Scale	251	18	40	29.35	3.869
Total Perceived Social Support scores	251	5.00	21.00	15.6454	3.49632
Valid N (listwise)	251				

**Table 2** Correlation between impostor phenomenon, achievement motivation, parenting bonding and perceived social support

**Correlations**

		Total IP Score	Total Achievement Motivation	Total Parenting Bonding Scale	Total Perceived Social Support scores
Total IP Score	Pearson Correlation	1	.549**	-.017	-.105
	Sig. (2-tailed)		.000	.784	.098
	N	251	251	251	251
Total Achievement Motivation	Pearson Correlation	.549**	1	.015	-.120
	Sig. (2-tailed)	.000		.810	.057
	N	251	251	251	251
Total Parenting Bonding Scale	Pearson Correlation	-.017	.015	1	.151*
	Sig. (2-tailed)	.784	.810		.016
	N	251	251	251	251
Total Perceived Social Support scores	Pearson Correlation	-.105	-.120	.151*	1
	Sig. (2-tailed)	.098	.057	.016	
	N	251	251	251	251

\*\* . Correlation is significant at the 0.01 level (2-tailed).

\* . Correlation is significant at the 0.05 level (2-tailed).