Investigating the Relationship Between Impostor Syndrome and Work Efficiency, By Exploring the Moderating Role of Social Support

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Abstract

The present study examined the relationship between impostor syndrome and work efficiency among 320 employees in the private IT sector, investigating the moderating role of social support (appraisal, belonging, tangible, and total support). impostor syndrome, characterized by persistent self-doubt despite success, poses a psychological challenge, while work efficiency is crucial for organizational success. The study employed validated survey scales to measure impostor syndrome, work efficiency, and social support. Correlation and moderation analyses were conducted. Results indicated that social support significantly moderated the relationship between impostor syndrome and work efficiency. Specifically, appraisal support (B = -0.00267, p = 0.007), belonging support (B = -0.00449, p < 0.001), tangible support (B = -0.00278, p = 0.025), and total social support (B = -0.00162, p < 0.001) reduced the negative impact of impostor syndrome on work efficiency. The direct effect of impostor syndrome on work efficiency was not consistently significant, but employees with higher social support exhibited better work performance. These findings suggest that fostering a supportive work environment can mitigate the negative effects of impostor syndrome, enhancing employee well-being and productivity.

Keywords: Impostor syndrome, social support, organizational psychology, employee well-being

Introduction

Impostor syndrome (IS), originally developed by Clance and Imes (1978), is characterized by persistent feelings of inadequacy despite evident accomplishments. Individuals experiencing IS often believe they have deceived others about their competencies, leading to a constant fear of being exposed as frauds. Research has indicated that IS can hinder various aspects of personal and professional life, including work efficiency. While it primarily affects high-achieving individuals, recent studies suggest its implications are broader, impacting organizational settings significantly (Clance & Imes, 1978; Legassie

et al., 2008).

Recent literature underscores the negative consequences of IS on work-related outcomes. For instance, McDowell et al. (2015) found a significant negative correlation (r = -0.34, p < .05) between IS and self-efficacy, which subsequently affects work performance. On the other hand, Tewfik (2022) suggested that IS does not necessarily impair performance directly but may influence interpersonal effectiveness and emotional well-being. While these mixed findings highlight the complexity of IS's impact on work efficiency, more research is needed to explore the conditions under which IS may negatively affect work outcomes.

One potential buffer against the negative effects of IS is Social Support. Social support, which includes emotional, informational, and practical assistance, has been shown to improve employee well- being and performance (Cohen & Hoberman, 1983). The moderating role of social support in the relationship between IS and work efficiency has received limited empirical attention, but its importance is emphasized by its role in reducing workplace stress and improving job satisfaction (Haar & de Jong, 2024). Given the existing gaps in the literature, this study aims to explore the relationship between IS and work efficiency and how social support might mitigate the negative effects of IS. "While Impostor Syndrome (IS) has been widely studied in professional environments, the role of social support as a moderator in its relationship with work efficiency remains underexplored."This study seeks to investigate how IS affects work efficiency and whether social support moderates this relationship among employees in the IT sector.

Objectives:

This study investigated the relationship between Impostor Syndrome and work efficiency among employees in the IT sector, examining the moderating role of Social Support. A sample of 320 IT employees participated in the study.

Hypothesis

1. **H1:** Impostor Syndrome (IS) will be negatively associated with work efficiency among IT sector employees.
2. **H2:** Social support will moderate the negative relationship between Impostor Syndrome (IS) and work efficiency, such that the association will be weaker for employees with higher social support.

Participants

The participants consisted of 290 full-time employees from various IT companies, recruited through convenience sampling by distributing printed questionnaires at their workplaces. The sample included individuals aged 20–50 years.

Measures

Clance Impostor Phenomenon Scale (CIPS)

The Clance Impostor Phenomenon Scale (CIPS;Clance,1985), originally developed by Clance and Imes (1978), is a 20-item scale designed to measure feelings of intellectual fraudulence and self-doubt, which are central to the experience of impostor syndrome. The scale has been widely used to assess the psychological challenges associated with impostor syndrome. CIPS has demonstrated strong internal consistency (α = 0.75–0.90) and has shown validity through correlations with self-esteem, anxiety, and

perfectionism."The CIPS has also shown validity when correlated with other psychological constructs such as self-esteem, anxiety, and perfectionism.

Interpersonal Support Evaluation List (ISEL)

The Interpersonal Support Evaluation List (ISEL; Cohen & Hoberman, 1983) developed by Cohen and Hoberman (1983), is a 12-item scale that assesses perceived social support across three subscales: Appraisal Support, Belonging Support, and Tangible Support. Each subscale measures different dimensions of social support, crucial for understanding how social support moderates the effects of impostor syndrome. "ISEL has demonstrated strong reliability ($\alpha > 0.80$) and has shown convergent validity with established social support measures (Brookings & Bolton, 1988)." ISEL has demonstrated strong reliability ($\alpha > 0.80$; Brookings & Bolton, 1988). It has also shown strong correlations with other validated measures of social support."

Individual Work Performance Questionnaire (IWPQ)

The Individual Work Performance Questionnaire (IWPQ; Koopmans et al., 2015) developed by Koopmans et al. (2015), is an 18-item scale used to measure work performance across three dimensions: Task Performance, Contextual Performance, and Counterproductive Work Behavior. This scale is particularly relevant for assessing work efficiency in diverse occupational sectors, including IT. The IWPQ has demonstrated acceptable construct validity and discriminant validity, with Cronbach's alpha values exceeding 0.70, making it a reliable tool for measuring work performance in organizational settings.

Procedure

The study employed a correlational design. Participants were recruited through offline channels by visiting IT companies and distributing the survey among employees. Snowball sampling was also used to increase participation. Before data collection, each participant was informed about their rights, including voluntary participation and the ability to withdraw at any time.

The survey included validated scales measuring impostor syndrome, social support, and work efficiency. Participants' anonymity was ensured, and informed consent was obtained prior to participation. The study adhered to ethical guidelines by ensuring that no harm came to participants and providing support resources in case of psychological distress.

Data Analysis

Quantitative analysis was conducted using Jamovi (Version X.X). Descriptive statistics summarized demographic information and key variable distributions.

A correlation analysis examined relationships between impostor syndrome, work efficiency, and social support. Moderation analysis was performed using the MedMod module in Jamovi, with impostor syndrome as the independent variable (IV), work efficiency as the dependent variable (DV), and social support as the moderator.

Additionally, moderation was analyzed within specific domains of social support (Appraisal, Belonging, and Tangible Support) to better understand how different types of support influence the relationship between impostor syndrome and work efficiency.

Results

Table 1
Descriptives

Variable	M	SD	Shapiro-Wilk W	p-value
IP Scale	58.51	13.41	0.99	0.23
Appraisal Scale	11.60	2.81	0.96	< .001
Belonging Scale	11.52	2.74	0.96	< .001
Tangible Scale	11.91	2.50	0.96	< .001
Socail Support Total	35	6.592	0.98	0.01
Individual Work Performance Questionnaire	2.07	0.679	0.99	0.11

Note: M=Mean, SD=Standard Deviation. Shapiro-Wilk W tests for normality. p<.05 indicates significant deviation from normality.

The descriptive statistics for all study variables, including mean (M), standard deviation (SD), Shapiro-Wilk W statistic, and p-value, are presented in Table 1.

The Impostor Phenomenon (IP) Scale had a mean of 58.50 (SD = 13.4) , with data approximately normally distributed (W = 0.99 , p = 0.23) Work efficiency (IWPQ) also followed a normal distribution (M 2.07, SD = 0.68 W = 0.99 p = 0.11)

However, social support subscales showed significant deviations from normality: Appraisal Support (M = 11.60, SD = 2.81 W = 0.96 p < .001), Belonging Support (M = 11.5 , SD = 2.74 W = 0.97 p < .001), and Tangible Support (M = 11.9 , SD = 2.5 W = 0.96 p < .001). Total Social Support (M = 35 SD = 6.59) also showed mild non-normality (W = 0.99 , p = 0.01)

Given these findings, parametric analyses are appropriate for the IP Scale and Work Efficiency (IWPQ), while non-parametric tests may bajneeded for social support variables due to deviations from normality.

Table 2 Spearman's Correlation Matrix for Study Variables

Variable	Age	IP Scale	Appraisal Support (AS)	Belonging Support (BS)	Tangible Support (TS)	SS Total	IPWQ
Age	—						
IP Scale	−0.11	—					
AS	0.09	−0.34***	—				
BS	0.07	−0.28***	0.54***	—			
TS	0.10	−0.25***	0.52***	0.49***	—		
SS	0.09	−0.35**	0.83***	0.81***	0.80***	—	

Total		*					
IPWQ	0.18**	−0.02	0.10	0.20***	0.13*	0.17**	—

Note: *p < .05 (), p < .01 (), **p < .001** (). Spearman's rho values are reported. IP= Impostor Phenomenon Scale, AS= Appraisal Support, BS= Belonging Support, TS= Tangible Support, SS Total- Social Support Total, IPWQ= Individual Performance Work Efficiency.

The correlation analysis using Spearman's correlation coefficient examined relationships between key variables: Impostor Phenomenon (IP) Scale, social support dimensions (appraisal, belonging, tangible, and total), and work efficiency (measured by IPWQ). The following key findings relate to the research hypotheses:

Impostor Syndrome and Social Support

Impostor syndrome showed a moderate negative correlation with appraisal support (rho = - 15) p 001), indicating that higher impostor syndrome scores are associated with lower perceived appraisal support.

A significant negative correlation was observed between impostor syndrome and belonging support zeta*rho = - 28 p < 0.001) suggesting that individuals with higher impostor syndrome scores feel lower social belonging.

Similarly, impostor syndrome negatively correlated with tangible support (26. p <,001) and total social support (rho = - 35 p <,001) demonstrating that individuals with stronger impostor feelings perceive lower overall social support. These findings support the hypothesis that higher impostor syndrome scores are linked to lower perceived social support across different dimensions.

Impostor Syndrome and Work Efficiency

Impostor syndrome showed no significant correlation with work efficiency (IPWQ) (p = - 0.02 p = 702), suggesting that higher impostor syndrome scores do not directly impact work performance.

This result contradicts the hypothesis that impostor syndrome negatively affects work efficiency.

Social Support and Work Efficiency

Total social support was positively correlated with work efficiency (rho = 17 p =,003) suggesting that individuals with greater perceived social support tend to perform better at work.

Among social support dimensions, tangible support had a small but significant positive correlation with work efficiency (rho = 0.14 , p = 0.022) indicating that practical support may slightly enhance work performance. These results highlight the importance of social support in workplace performance, even though impostor syndrome itself does not directly impact work efficiency.

Table 3 Moderation Analysis: IV-Impostor Phenomenon (IP) with Various Moderators and DV- Invidiual Work Performance (IWP)

Moderator	Predictor	Estimate	SE	Z	p
Appraisal Support	IP Scale	0.00464	0.00292	1.590	0.112
	Appraisal	0.01261	0.01398	0.903	0.367
	IP Scale x Appraisal	-0.00267	9.97e-4	-2.681	0.007

Belonging Support	IP Scale	0.00713	0.00283	2.520	0.012
	Belonging Scale	0.05256	0.01387	3.790	< .001
	IP Scale x Belonging	-0.00449	0.00105	-4.270	< .001
Tangible Support	IP Scale	0.00530	0.00292	1.820	0.069
	Tangible Scale	0.03149	0.01567	2.010	0.044
	IP Scale x Tangible	-0.00278	0.00124	-2.240	0.025
Total SS Scale	IP Scale	0.00681	0.00286	2.380	0.017
	SS Total	0.01716	0.00583	2.940	0.003
	IP Scale x SS Total	-0.00162	4.34e-4	-3.730	< .001

Note: This combined table organizes all the moderation analyses under a single layout, following APA formatting for tables.

The moderation analysis revealed that all forms of social support (appraisal, belonging, tangible, and total social support) significantly moderated the relationship between impostor syndrome (IS) and individual work performance efficiency. Specifically, the interaction between IS and appraisal support (B = -0.00267, p = 0.007) was significant, indicating that appraisal support reduces the negative impact of IS on performance. Belonging support also significantly moderated the relationship (B = -0.00449, p < 0.001), suggesting that higher belonging support mitigates the detrimental effects of IS. Similarly, tangible support moderated the IS-work performance relationship (B = -0.00278, p = 0.025), and results indicated that tangible support buffers the negative impact of impostor syndrome on work performance efficiency.

In all cases, the interaction effects were negative, meaning that as social support increases, the negative impact of IS on work performance decreases. Total social support was found to significantly moderate the relationship between impostor syndrome and work performance, $B = -0.00162$, SE = 0.000434, $Z = -3.73$, $p < 0.001$. Both the main effect of impostor syndrome, $B = 0.00681$, SE = 0.00286, $Z = 2.38$, $p = 0.017$, and the main effect of total social support, $B = 0.01716$, SE = 0.00583, $Z = 2.94$, $p = 0.003$, were significant. This suggests that higher levels of overall social support reduce the negative influence of impostor syndrome on individual work performance.

Discussion

This study explored the relationship between impostor syndrome and individual work performance efficiency, with a focus on the moderating role of various forms of social support: appraisal, belonging, tangible, and total support. The findings offer valuable insights into how social support can buffer the negative effects of impostor syndrome on work performance.

The correlation analysis revealed that impostor syndrome was negatively associated with all forms of social support, aligning with previous research that suggests individuals with impostor syndrome often feel disconnected and unsupported (Vergauwe et al., 2015). Social support variables, including appraisal, belonging, and tangible support, were highly intercorrelated, suggesting that those who perceive one form of support often experience others. Notably, Social Support was positively related to work

performance efficiency, reinforcing the idea that robust support networks enhance job performance. Moreover, individuals with higher tangible and total social support reported better work efficiency despite experiencing impostor syndrome, emphasizing the importance of workplace support systems. The moderation analysis confirmed that social support significantly buffers the negative impact of impostor syndrome on work performance across all forms of support.

Social Support

Social Support had the strongest moderating effect, showing that a comprehensive support system combining appraisal, belonging, and tangible support is most effective in reducing the negative influence of impostor syndrome on work performance. The Social Support scale comprises three domains: appraisal support, belonging support, and tangible support.

Appraisal Support as a moderator

Appraisal support moderated the relationship, indicating that constructive feedback and validation reduce the detrimental effect of impostor syndrome on work performance. This aligns with research suggesting that positive appraisal helps alleviate self-doubt (McDowell et al., 2015).

Belonging Support as a moderator

Belonging support also had a significant moderating effect, highlighting the importance of feeling accepted and valued in the workplace. Creating an inclusive environment can mitigate impostor syndrome's impact on performance.

Tangible Support as a moderator

Tangible support played a significant moderating role, suggesting that access to practical resources and assistance enables individuals experiencing impostor syndrome to maintain their work efficiency by reinforcing their perceived competence.

Conclusion

Overall, the study underscores the critical role of social support in mitigating the negative effects of impostor syndrome on work performance. Cultivating a supportive, inclusive, and resource- rich work environment can enhance employees efficiency, even for those experiencing impostor- related doubts and insecurities.

While the study provides valuable insights, it has some limitations. First, the study relies on self-reported data, which may be subject to bias. Future research could incorporate objective measures of work performance or longitudinal designs to better capture the dynamic relationship between impostor syndrome and work efficiency over time. Additionally, while social support was explored as a moderator, future studies could examine other potential moderators, such as self-efficacy or emotional intelligence, which may also influence the relationship between impostor syndrome and work performance.

The findings have important implications for organizational interventions aimed at supporting employees with impostor syndrome. The strong moderating effect of social support highlights the need for employers to create environments that foster belonging, provide practical resources, and offer positive feedback and appraisal. Specifically, organizations should consider implementing mentorship programs, peer support networks, and opportunities for feedback to help employees manage impostor- related

feelings and improve their work efficiency. Additionally, human resource policies and workplace wellness programs should prioritize fostering a supportive work environment where individuals feel valued and included." By fostering strong social support systems, organizations can reduce the negative impact of impostor syndrome, ultimately enhancing employee well-being and productivity."

Social Implications

The findings of this study carry significant social implications across various levels, including individuals, organizations, and society as a whole. A key area of impact lies in workplace culture and inclusivity. Organizations can foster a sense of psychological safety and belonging by implementing mentorship programs, peer support networks, and diversity, equity, and inclusion (DEI) initiatives. These efforts can help reduce feelings of impostor syndrome among employees, ensuring a more supportive and inclusive professional environment.

Mental health awareness in the workplace is another crucial aspect influenced by this study. Greater recognition of workplace mental health challenges can lead to improved human resource policies and employee assistance programs (EAPs). By promoting self-efficacy and resilience, organizations can create a healthier work environment where employees feel more confident in their abilities and are encouraged to seek support when needed.

Leadership and management practices also play a critical role in addressing impostor syndrome. Leaders who provide constructive and supportive feedback can help employees build confidence and trust in their own capabilities. Training managers to recognize and address impostor syndrome can further contribute to a workplace culture that nurtures professional growth and self-assurance among employees.

Additionally, the study highlights the importance of gender and social equity in career advancement. Organizations should implement gender-inclusive policies that ensure equal opportunities, fair recognition, and equitable career progression. Addressing impostor syndrome's disproportionate impact on women and marginalized groups can help create a more balanced and fair professional landscape.

Finally, shifting societal perceptions of success is essential in reducing the stigma associated with self-doubt and seeking help. Encouraging a support-based approach to achievement can normalize discussions around impostor syndrome and mental well-being. Educational institutions and professional development programs can contribute by incorporating self-efficacy training and impostor syndrome workshops, helping students and early-career professionals develop the confidence and resilience needed for long-term success.

References

1. Clance, P. R., & Imes, S. A. (1978). The impostor phenomenon in high achieving women: Dynamics and therapeutic intervention. *Psychotherapy: Theory, Research & Practice, 15*(3), 241–247. https://doi.org/10.1037/h0086006
2. Halbesleben, J. R. B. (2006). Sources of social support and burnout: A meta-analytic test of the conservation of resources model. *Journal of Applied Psychology, 91*(5), 1134–1145. https://doi.org/10.1037/0021-9010.91.5.1134
3. Legassie, J., Zibrowski, E. M., & Goldszmidt, M. A. (2008). Measuring resident well-being: Impostorism and burnout syndrome in residency. *Journal of General Internal Medicine, 23*(7), 1090–1094. https://doi.org/10.1007/s11606-008-0536-x
4. McDowell, W. C., Grubb III, W. L., & Geho, P. R. (2015). The impact of self-efficacy and perceived

organizational support on the impostor phenomenon. *Journal of Organizational Culture, Communications, and Conflict, 19*(1), 82–96.

5. Tewfik, B. A. (2022). The impostor phenomenon revisited: Examining the relationship between workplace impostor thoughts and interpersonal effectiveness at work. *Journal of Applied Psychology, 107*(2), 181–199. https://doi.org/10.1037/apl0000892

6. Vergauwe, J., Wille, B., Feys, M., De Fruyt, F., & Anseel, F. (2015). Fear of being exposed: The trait-relatedness of the impostor phenomenon and its relevance in the work context. *Journal of Business and Psychology, 30*(3), 565–581. https://doi.org/10.1007/s10869-014-9382-5

7. Koopmans, L., Bernaards, C., Hildebrandt, V., Schaufeli, W., de Vet, H. C. W., & van der Beek, A. J. (2011). Conceptual frameworks of individual work performance: A systematic review. *Journal of Occupational and Environmental Medicine, 53*(8), 856–866. https://doi.org/10.1097/JOM.0b013e318226a763

8. Cohen, S., & Hoberman, H. M. (1983). Positive events and social supports as buffers of life change stress. *Journal of Applied Social Psychology, 13*(2), 99–125. https://doi.org/10.1111/j.1559-1816.1983.tb02325.x

9. Brookings, J. B., & Bolton, B. (1988). Confirmatory factor analysis of the Interpersonal Support Evaluation List. *American Journal of Community Psychology, 16*(1), 137–147. https://doi.org/10.1007/BF00906072

10. Koopmans, L., Bernaards, C., Hildebrandt, V., & van der Beek, A. J. (2015). Development of an individual work performance questionnaire. *International Journal of Productivity and Performance Management, 63*(1), 24–36. https://doi.org/10.1108/IJPPM-02-2013-0023

11. Neureiter, M., & Traut-Mattausch, E. (2016). Inspecting the dangers of feeling like a fake: An empirical investigation of the impostor phenomenon in the world of work. *Frontiers in Psychology, 7*, 1445. https://doi.org/10.3389/fpsyg.2016.01445