KMAN PUBLISHING INSTITUTE
Journal Website

Article history:
Received 13 July 2025
Revised 08 September 2025
Accepted 17 September 2025
Published online 01 October 2025

Journal of Personality and Psychosomatic Research

Volume 3, Issue 4, pp 1-10

E-ISSN: 3041-8542

Cognitive Flexibility Mediating the Link Between Perfectionism and Impostor Feelings Among Female Undergraduate Students

Daniela. Gottschlich[1*], Oriana. Piskorz-Ryń[2]

[1] Faculty of Health Sciences, Simon Fraser University, Vancouver, BC, Canada
[2] Faculty of Health Sciences, University of Caldas, Street 6623b-03, Manizales 170004, Caldas, Colombia

*** Corresponding author email address**: danielagottschlich@wayne.edu

A r t i c l e I n f o

Article type:
Original Research

How to cite this article:
Gottschlich, D., & Piskorz-Ryń, O. (2025). Cognitive Flexibility Mediating the Link Between Perfectionism and Impostor Feelings Among Female Undergraduate Students. *Journal of Personality and Psychosomatic Research, 3*(4), 1-10.
https://doi.org/10.61838/kman.jppr.4566

© 2025 the authors. Published by KMAN Publication Inc. (KMANPUB), Ontario, Canada. This is an open access article under the terms of the Creative Commons Attribution-NonCommercial 4.0 International (CC BY-NC 4.0) License.

A B S T R A C T

This study aimed to examine the mediating role of cognitive flexibility in the relationship between perfectionism and impostor feelings among female undergraduate students in Canada. A descriptive correlational research design was employed with a total sample of 400 female undergraduate students selected through stratified random sampling based on the Morgan and Krejcie (1970) table. Standardized self-report instruments were used: the Frost Multidimensional Perfectionism Scale (FMPS; Frost et al., 1990) to assess perfectionism, the Cognitive Flexibility Scale (CFS; Dennis & Vander Wal, 2010) to measure cognitive flexibility, and the Clance Impostor Phenomenon Scale (CIPS; Clance, 1985) to assess impostor feelings. Data were analyzed using SPSS version 27 for descriptive and correlation analyses and AMOS version 21 for structural equation modeling (SEM). Model fit was evaluated through indices including χ^2/df, GFI, AGFI, CFI, TLI, and RMSEA, with significance determined at $p < .05$. Results revealed significant relationships among the study variables. Perfectionism was positively correlated with impostor feelings ($r = .57$, $p < .001$), while cognitive flexibility was negatively correlated with both perfectionism ($r = -.48$, $p < .001$) and impostor feelings ($r = -.53$, $p < .001$). The SEM analysis demonstrated excellent model fit (χ^2/df = 1.48, GFI = .95, CFI = .97, RMSEA = .035). Perfectionism exerted a significant direct effect on impostor feelings ($\beta = 0.38$, $p < .001$) and a negative effect on cognitive flexibility ($\beta = -0.41$, $p < .001$). Cognitive flexibility significantly predicted lower impostor feelings ($\beta = -0.33$, $p < .001$) and partially mediated the perfectionism–impostor relationship (indirect $\beta = 0.13$, $p < .01$). The findings suggest that cognitive flexibility functions as a protective cognitive mechanism that mitigates the negative impact of perfectionism on impostor feelings. Enhancing cognitive flexibility may therefore reduce self-doubt and promote adaptive coping among perfectionistic female students.

Keywords: *Perfectionism; Cognitive Flexibility; Impostor Feelings; Female Students.*

1. Introduction

Perfectionism and impostor feelings represent two pervasive psychological constructs that are increasingly observed among high-achieving populations, particularly female undergraduate students. Both constructs reflect maladaptive self-evaluative processes that can impair academic functioning and emotional well-being. Perfectionism, traditionally viewed as a multidimensional personality disposition characterized by striving for flawlessness and setting excessively high performance standards, is often associated with self-critical evaluations and fear of failure (Yang et al., 2025). Meanwhile, impostor feelings—commonly referred to as the impostor phenomenon—reflect internalized self-doubt and the persistent belief that one's achievements are undeserved, often accompanied by a fear of being exposed as a fraud (Andira & Daulay, 2025). The intersection between these two constructs, and the role of cognitive flexibility in mediating their relationship, offers a compelling avenue for understanding female students' emotional and cognitive adaptation in higher education.

Recent scholarship has emphasized that impostor feelings are not merely a reflection of low self-esteem but are complex psychological experiences rooted in perfectionistic tendencies, cognitive rigidity, and social comparison processes (Choi & Lee, 2025; Pereira & Deemer, 2023). Among female students, these experiences may be exacerbated by societal expectations of competence and gender-related performance pressures. The impostor phenomenon, as highlighted by (Westover, 2025), often emerges in competitive and evaluative environments where success is publicly recognized but internally discounted. This internal incongruence between external achievements and self-perception contributes to emotional exhaustion, self-sabotaging behaviors, and diminished academic confidence (Fimiani et al., 2024). Research conducted in educational and organizational settings consistently demonstrates that individuals with high impostor tendencies tend to attribute success to external factors such as luck or effort rather than ability, thereby reinforcing cycles of self-doubt and perfectionistic striving (Tasya et al., 2024; Yaffe, 2023).

Perfectionism, while occasionally conceptualized as a driver of achievement, often carries detrimental psychological costs. The distinction between adaptive and maladaptive perfectionism has been well-documented in the literature (Park & Shin, 2022; Yang et al., 2025). Adaptive perfectionism involves high personal standards accompanied by self-compassion and cognitive flexibility, whereas maladaptive perfectionism is characterized by excessive concern over mistakes, fear of failure, and contingent self-worth (Zhang et al., 2022). The latter has been shown to predict negative outcomes such as anxiety, depression, burnout, and rumination (Fahroedin & Morris, 2024; Jannesari, 2025). Particularly within academic contexts, perfectionism may amplify impostor feelings by reinforcing the need for flawless performance and intensifying fear of exposure when errors occur (Duncan et al., 2023). As (An et al., 2025) observed, perfectionistic individuals are prone to cognitive avoidance and repetitive negative thinking patterns that impede psychological flexibility and self-acceptance.

Cognitive flexibility, defined as the mental ability to adapt thinking and behavior in response to changing demands and situational contexts, serves as a vital regulatory mechanism in managing perfectionistic and impostor-related cognition (Lee & Choi, 2025). It allows individuals to reinterpret setbacks, generate alternative explanations for outcomes, and disengage from rigid self-critical schemas. The absence of cognitive flexibility often perpetuates the rigid thinking and emotional distress associated with impostor feelings (Yang et al., 2024). As demonstrated by (Hasheminejad et al., 2024), individuals with higher cognitive flexibility exhibit greater resilience and psychological health, even when perfectionistic tendencies are present. Conversely, deficits in flexibility tend to exacerbate maladaptive perfectionism and reinforce the sense of fraudulence characteristic of the impostor phenomenon (Bagheri et al., 2024).

Within higher education, cognitive flexibility also plays a mediating role between perfectionism and self-evaluative emotions. (Lee & Choi, 2025) found that cognitive flexibility and self-compassion jointly mitigated the effects of evaluative concerns perfectionism on social anxiety, suggesting a similar moderating function for impostor experiences. The capacity to flexibly shift perspectives and reinterpret performance-related stressors reduces the likelihood that perfectionistic individuals will internalize failure as an indication of incompetence. This aligns with (Yosopov et al., 2024), who identified fear of failure and overgeneralization of negative outcomes as key cognitive mediators between perfectionism and procrastination, two constructs closely linked with impostor tendencies. Moreover, (Guedes, 2023) provided evidence that impostor feelings can undermine self-efficacy and job performance

JPPR
E-ISSN: 3041-8542

among top managers, underscoring the broader occupational relevance of these mechanisms.

Empirical studies have further illuminated the interplay between perfectionism, cognitive flexibility, and impostor feelings across different contexts. For instance, (Choi & Lee, 2025) used a grounded theory approach to explore the impostor phenomenon among Korean daycare directors, revealing that cognitive rigidity and unrealistic self-expectations perpetuated impostor cycles. Similarly, (Andira & Daulay, 2025) reported that student leaders in Indonesian universities often experience impostor feelings linked to the pressure to maintain consistent excellence, an experience intertwined with cognitive inflexibility. These findings align with the theoretical proposition that perfectionism fosters rigid standards that constrain cognitive adaptability, thereby heightening vulnerability to impostor feelings (Nurfadhilah & Archianti, 2024). In contrast, enhancing cognitive flexibility through mindfulness and reappraisal techniques has been associated with reduced self-doubt and improved self-concept clarity among students (Hasheminejad et al., 2024).

The impostor phenomenon has also been examined through diverse cultural and disciplinary lenses, revealing variations in prevalence and psychological correlates. (Yang et al., 2024) conducted a systematic review demonstrating that impostor syndrome is particularly prevalent among university students and early-career professionals, especially women in male-dominated fields. Cultural contexts that emphasize collectivism, modesty, or external validation may amplify impostor experiences due to greater sensitivity to others' evaluations (Pereira & Deemer, 2023). Likewise, (Perkins & Durkee, 2025) found that impostor feelings among Black undergraduates were significantly influenced by microaggressions, gender dynamics, and perceptions of belonging—highlighting the sociocultural underpinnings of the phenomenon. These patterns suggest that impostor feelings are both individually and socially constructed, shaped by cognitive, emotional, and environmental contingencies (Yaffe, 2023).

Recent theoretical models propose that cognitive flexibility functions as a psychological buffer within this triadic relationship. (Jannesari, 2025) demonstrated that perfectionism predicted parental stress through reduced psychological flexibility, paralleling mechanisms that may operate in academic impostorism. Similarly, (Fahroedin & Morris, 2024) identified cognitive rigidity as a central pathway through which perfectionistic tendencies lead to burnout and depressive symptoms among healthcare trainees. Such findings reinforce the notion that cognitive flexibility mitigates the emotional consequences of perfectionistic striving by facilitating adaptive coping and self-regulation. In academic contexts, cognitive flexibility enables students to reinterpret evaluation feedback constructively rather than catastrophically, thus weakening the cognitive foundation of impostor thoughts (Yang et al., 2025).

A growing body of evidence supports the mediating role of cognitive flexibility across a range of perfectionism-related outcomes. (Park & Shin, 2022) reported that cognitive flexibility enhanced creative performance by allowing individuals to balance self-imposed standards with innovative risk-taking. Similarly, (Miles et al., 2022) found that deficits in cognitive flexibility were a distinguishing feature of individuals with clinical perfectionism and eating disorders, suggesting broader implications for emotional regulation. Within academic populations, cognitive flexibility has been shown to moderate the effects of maladaptive perfectionism on psychological distress, acting as a cognitive resilience factor (Yang et al., 2024). As (Shayesteh et al., 2024) noted, impostor feelings often co-occur with psychosomatic symptoms and physiological anxiety, indicating that cognitive inflexibility may also contribute to stress-related somatization.

In addition to its cognitive mechanisms, perfectionism-impostor dynamics intersect with self-perception and social identity processes. (Duncan et al., 2023) observed that data science students experiencing impostor feelings exhibited self-doubt despite strong objective competence, mirroring patterns of internalized perfectionistic evaluation. Similarly, (Fimiani et al., 2024) identified guilt over success and self-sabotaging behaviors as psychological consequences of impostor experiences among professionals, further linking perfectionism with maladaptive emotional regulation. (Guedes, 2023) emphasized that these internal conflicts can undermine leadership confidence, indicating that impostor feelings persist even in high-achievement contexts. Such patterns reinforce the cognitive-behavioral perspective that impostorism is sustained through rigid cognitive schemas—particularly those related to perfectionistic expectations and failure sensitivity (Yosopov et al., 2024).

Given these theoretical and empirical insights, the current study seeks to extend understanding of the cognitive mechanisms that link perfectionism to impostor feelings among female undergraduate students in Canada.

JPPR
E-ISSN: 3041-8542

2. Methods and Materials

2.1. Study Design and Participants

This research employed a descriptive correlational design aimed at examining the mediating role of cognitive flexibility in the relationship between perfectionism and impostor feelings among female undergraduate students in Canada. The population consisted of female students enrolled in various public and private universities across different academic disciplines. Based on Morgan and Krejcie's (1970) sample size determination table, a total of 400 participants were selected through stratified random sampling to ensure proportional representation across age groups and fields of study. Data were collected using standardized self-report questionnaires administered online. Participation was voluntary, and respondents provided informed consent prior to participation. Ethical principles of confidentiality and anonymity were strictly maintained throughout the research process.

2.2. Measures

Impostor feelings were assessed using the Clance Impostor Phenomenon Scale (CIPS) developed by Pauline R. Clance in 1985. The instrument consists of 20 items rated on a 5-point Likert scale ranging from 1 (not at all true) to 5 (very true), with higher scores indicating stronger impostor feelings. The scale measures the extent to which individuals experience self-doubt, fear of failure, and the inability to internalize success despite evident competence. The CIPS includes three subscales: (1) Fear of Failure, (2) Discounting Praise, and (3) Feeling Like a Fraud. Numerous studies have confirmed the scale's construct validity and internal consistency reliability, with Cronbach's alpha coefficients typically ranging from .85 to .92, demonstrating its strong psychometric properties across diverse populations.

Cognitive flexibility was measured using the Cognitive Flexibility Scale (CFS) developed by Dennis and Vander Wal in 2010. This self-report instrument comprises 12 items rated on a 6-point Likert scale ranging from 1 (strongly disagree) to 6 (strongly agree), with higher scores indicating greater cognitive flexibility. The scale assesses individuals' perceived ability to adapt their thinking and behavior to changing situations, generate multiple alternatives, and perceive difficult situations as controllable. The CFS includes three subscales: (1) Perception of Control, (2) Awareness of Alternatives, and (3) Adaptability. The tool has demonstrated high internal consistency (Cronbach's $\alpha \approx .84$) and strong convergent and discriminant validity in various cultural and academic contexts.

Perfectionism was assessed using the Frost Multidimensional Perfectionism Scale (FMPS) developed by Frost, Marten, Lahart, and Rosenblate in 1990. The FMPS consists of 35 items rated on a 5-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree), with higher scores reflecting greater levels of perfectionistic tendencies. The scale comprises six subscales: (1) Concern over Mistakes, (2) Personal Standards, (3) Parental Expectations, (4) Parental Criticism, (5) Doubt about Actions, and (6) Organization. The FMPS has been widely used in academic and clinical research, with robust evidence supporting its factorial validity and internal consistency (Cronbach's α values typically between .77 and .93). Its reliability and construct validity have been confirmed across multiple cultural samples, including university student populations.

2.3. Data Analysis

Data were analyzed using SPSS version 27 and AMOS version 21. Descriptive statistics, including means, standard deviations, and frequency distributions, were computed to summarize demographic characteristics and study variables. Pearson's correlation coefficients were calculated to determine the relationships between the dependent variable (impostor feelings), the independent variable (perfectionism), and the mediating variable (cognitive flexibility). To test the hypothesized mediation model, Structural Equation Modeling (SEM) was performed using AMOS. The fit of the structural model was evaluated through multiple indices, including Chi-square (χ^2), degrees of freedom (df), the Chi-square/df ratio, Comparative Fit Index (CFI), Goodness of Fit Index (GFI), Tucker-Lewis Index (TLI), and Root Mean Square Error of Approximation (RMSEA). Significance levels were set at $p < .05$ for all statistical tests.

3. Findings and Results

The sample consisted of 400 female undergraduate students aged between 18 and 25 years ($M = 21.37$, $SD = 1.94$). In terms of academic level, 152 participants (38.1%) were first-year students, 117 (29.2%) were in their second year, 89 (22.3%) were third-year students, and 42 (10.4%) were in their final year. Regarding academic discipline, 176 students (44.1%) were majoring in social sciences, 132 (33.0%) in natural sciences, and 92 (23.0%) in humanities

JPPR
E-ISSN: 3041-8542

and arts. The majority of participants were enrolled in public universities (n = 263, 65.8%), while the remaining 137 students (34.2%) attended private institutions. The distribution of participants by marital status indicated that 389 (97.2%) were single and 11 (2.8%) were married.

Table 1

Descriptive Statistics for Study Variables (N = 400)

Variable	Mean (M)	Standard Deviation (SD)
Perfectionism	121.47	18.63
Cognitive Flexibility	56.82	9.74
Impostor Feelings	73.29	14.51

The descriptive statistics show that participants reported moderately high levels of perfectionism (M = 121.47, SD = 18.63) and impostor feelings (M = 73.29, SD = 14.51), alongside relatively high cognitive flexibility (M = 56.82, SD = 9.74). The variability in scores suggests meaningful individual differences across all constructs.

Prior to conducting correlation and SEM analyses, the statistical assumptions were examined and met. The data were screened for missing values and outliers; less than 2.3% of responses were missing and were replaced using mean substitution. The Kolmogorov–Smirnov test indicated that the data approximated a normal distribution ($p = .067$ for perfectionism, $p = .081$ for cognitive flexibility, and $p = .074$ for impostor feelings). Skewness and kurtosis values ranged between –0.84 and +0.97, which fall within the acceptable range of ±2, indicating univariate normality. Linearity and homoscedasticity were confirmed by visual inspection of scatterplots. The Variance Inflation Factor (VIF) values ranged from 1.18 to 2.07, showing no multicollinearity among variables. Additionally, Mardia's coefficient (12.46) was below the critical value of 20, confirming multivariate normality and suitability for SEM analysis.

Table 2

Pearson Correlations Between Study Variables (N = 400)

Variable	1	2	3
1. Perfectionism	—	—	—
2. Cognitive Flexibility	−.48** ($p < .001$)	—	—
3. Impostor Feelings	.57** ($p < .001$)	−.53** ($p < .001$)	—

The results of Pearson correlation analysis indicated significant relationships among all study variables. Perfectionism was positively correlated with impostor feelings ($r = .57$, $p < .001$), indicating that higher perfectionistic tendencies are associated with stronger impostor experiences. Cognitive flexibility was negatively correlated with both perfectionism ($r = −.48$, $p < .001$) and impostor feelings ($r = −.53$, $p < .001$), suggesting that greater flexibility is linked with lower perfectionism and reduced impostor experiences.

Table 3

Model Fit Indices for the Structural Equation Model

Fit Index	χ^2	df	χ^2/df	GFI	AGFI	CFI	TLI	RMSEA
Model	136.42	92	1.48	0.95	0.92	0.97	0.96	0.035

The model fit indices demonstrated an excellent fit to the data. The ratio of χ^2/df was 1.48, well below the recommended cutoff of 3.0, and other indices indicated a good model fit (GFI = .95, AGFI = .92, CFI = .97, TLI = .96, RMSEA = .035). These results confirm that the proposed structural model adequately represents the observed relationships among perfectionism, cognitive flexibility, and impostor feelings.

JPPR
E-ISSN: 3041-8542

Table 4

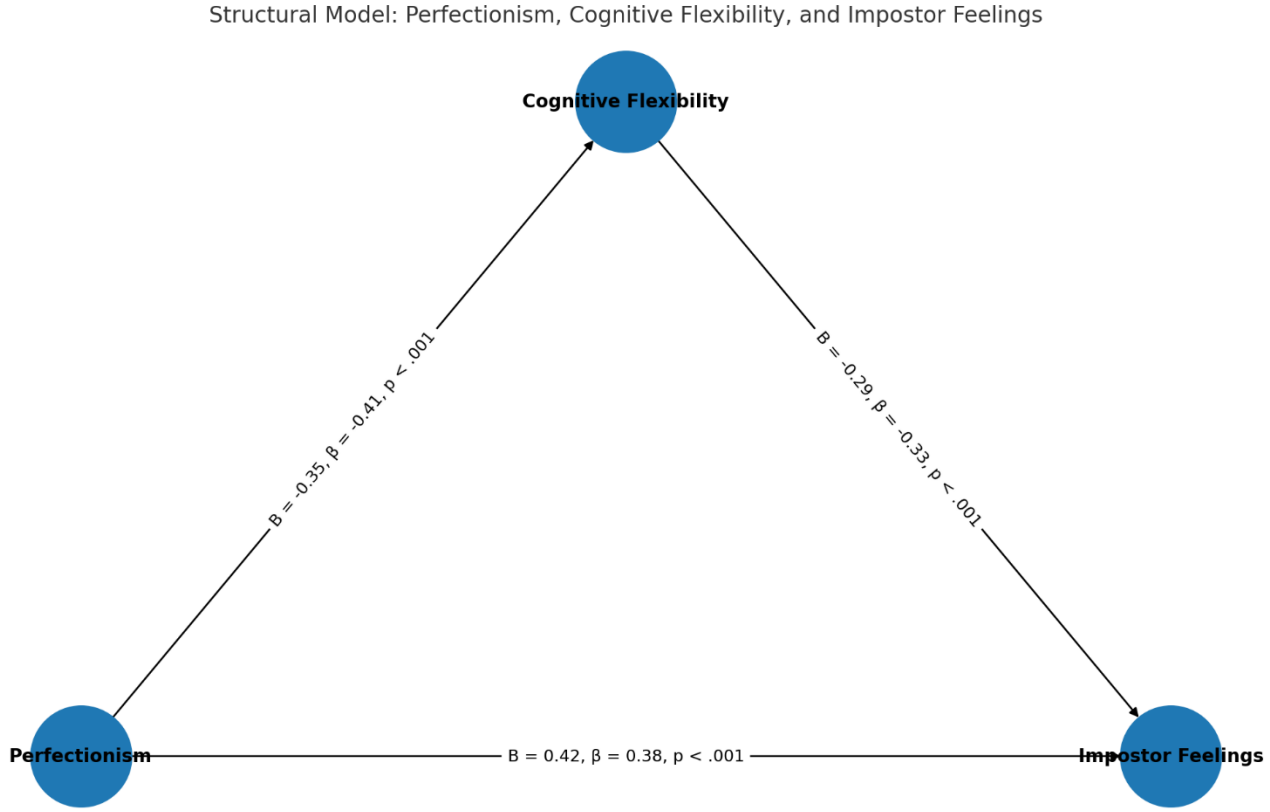
Direct, Indirect, and Total Effects Between Variables (N = 400)

Path	b	S.E.	β	p
Perfectionism → Impostor Feelings (Direct)	0.42	0.06	0.38	<.001
Perfectionism → Cognitive Flexibility	−0.35	0.05	−0.41	<.001
Cognitive Flexibility → Impostor Feelings	−0.29	0.07	−0.33	<.001
Perfectionism → Impostor Feelings (Indirect via Cognitive Flexibility)	0.10	0.03	0.13	<.01
Perfectionism → Impostor Feelings (Total Effect)	0.52	0.06	0.51	<.001

As shown in Table 4, perfectionism had a significant positive direct effect on impostor feelings (β = 0.38, p < .001), indicating that higher levels of perfectionism predicted stronger impostor experiences. Perfectionism also had a significant negative effect on cognitive flexibility (β = −0.41, p < .001), while cognitive flexibility negatively predicted impostor feelings (β = −0.33, p < .001). The indirect effect of perfectionism on impostor feelings through cognitive flexibility was statistically significant (β = 0.13, p < .01), confirming the mediating role of cognitive flexibility. The total effect (β = 0.51, p < .001) demonstrated that even after accounting for the mediator, perfectionism remained a strong predictor of impostor experiences.

Figure 1

Model with Beta Coefficients



4. Discussion and Conclusion

The present study examined the mediating role of cognitive flexibility in the relationship between perfectionism and impostor feelings among female undergraduate students in Canada. The results revealed several key findings that contribute to the growing literature on perfectionism, cognitive mechanisms, and impostor experiences. First, there was a significant positive correlation between perfectionism and impostor feelings,

JPPR
E-ISSN: 3041-8542

indicating that higher levels of perfectionistic tendencies were associated with stronger impostor experiences. Second, cognitive flexibility demonstrated a significant negative relationship with both perfectionism and impostor feelings, confirming its adaptive regulatory function in self-evaluative contexts. Finally, the structural equation modeling (SEM) analysis supported the hypothesized mediation model: cognitive flexibility partially mediated the effect of perfectionism on impostor feelings, suggesting that perfectionistic students who possess greater cognitive flexibility experience fewer impostor-related cognitions and emotional distress. These findings align with prior research emphasizing the central role of cognitive processes in shaping emotional regulation and self-perception in high-achieving populations (An et al., 2025; Lee & Choi, 2025).

The observed positive association between perfectionism and impostor feelings reinforces the theoretical understanding that both constructs share a common cognitive foundation rooted in self-critical evaluation and contingent self-worth. Students with elevated perfectionism often set unrealistically high standards and evaluate their success in absolute, dichotomous terms—success versus failure—thus fostering persistent self-doubt and fear of incompetence. This pattern resonates with (Yang et al., 2025), who noted that perfectionism often depletes emotional energy and contributes to burnout, a process that can heighten susceptibility to impostor experiences. Similarly, (Choi & Lee, 2025) demonstrated that professionals with high self-imposed standards tend to interpret even minor shortcomings as evidence of inadequacy, thereby reinforcing impostor-like cognitions. Within the Canadian context, where academic excellence is highly emphasized and social comparison is prevalent, perfectionism may function as both a motivator and a psychological burden, ultimately increasing the risk of internalized fraudulence among female students (Andira & Daulay, 2025).

The negative relationship between cognitive flexibility and impostor feelings observed in this study underscores the importance of adaptive cognitive processing in mitigating maladaptive self-beliefs. Cognitive flexibility enables individuals to reinterpret stressful or evaluative situations through multiple perspectives, reducing overgeneralization and emotional overreaction. This finding aligns with (Hasheminejad et al., 2024), who found that cognitive flexibility served as a protective factor in the mental health of Iranian immigrants, buffering the effects of perfectionism and acculturation stress. Similarly, (Lee & Choi, 2025) confirmed that cognitive flexibility moderated the link between evaluative concerns perfectionism and social anxiety, demonstrating its function as a resilience mechanism in emotionally demanding contexts. These findings collectively suggest that cognitive flexibility functions as a psychological moderator that disrupts the automatic activation of perfectionistic thoughts and impostor beliefs, promoting cognitive restructuring and emotional stability.

Moreover, the mediating role of cognitive flexibility found in this study aligns with the chain mediation models proposed by (An et al., 2025), who identified perfectionism and stress as sequential mediators linking cognitive avoidance to rumination among college students. In the present study, the partial mediation effect indicates that while perfectionism directly influences impostor feelings, cognitive flexibility reduces this effect by enabling individuals to reinterpret achievement-related stressors. Students with high cognitive flexibility may perceive challenges as opportunities for learning rather than as threats to self-image, thus diminishing the intensity of impostor experiences. This interpretation is consistent with the findings of (Fahroedin & Morris, 2024), who emphasized the role of psychological flexibility in mitigating burnout and depression among health professionals with perfectionistic tendencies. By contrast, individuals who display cognitive rigidity are more likely to adhere to rigid success standards, amplify self-criticism, and engage in maladaptive comparisons—cognitive patterns that perpetuate impostor thoughts (Nurfadhilah & Archianti, 2024).

The findings also expand the understanding of impostor feelings as multifaceted phenomena that extend beyond individual self-esteem deficits. As (Westover, 2025) noted, impostor experiences are often rooted in internalized self-doubt and a reluctance to attribute success to personal ability. This cognitive pattern mirrors perfectionistic cognition, in which achievements are discounted and failures magnified (Tasya et al., 2024). The mediating influence of cognitive flexibility in this relationship highlights that the way students process information and evaluate themselves plays a more central role than mere personality traits. Cognitive flexibility enables reappraisal of success, helping individuals attribute their accomplishments to effort and competence rather than external chance. Thus, interventions designed to enhance cognitive flexibility—such as mindfulness training, cognitive reappraisal, or acceptance-based approaches—may effectively weaken the perfectionism-impostor link (Yang et al., 2024).

JPPR
E-ISSN: 3041-8542

Furthermore, this study's results corroborate earlier findings that cognitive flexibility contributes to adaptive emotional functioning and performance under pressure. (Park & Shin, 2022) found that cognitive flexibility fosters creativity by allowing individuals to adjust their thinking and explore alternative solutions, an ability that directly counters the rigidity of perfectionistic thinking. In the same vein, (Miles et al., 2022) demonstrated that cognitive inflexibility is a defining feature among individuals with clinical perfectionism and eating disorders, suggesting its broader relevance across maladaptive self-evaluative conditions. Within academic contexts, cognitive flexibility allows students to shift focus from outcome-oriented evaluation to process-oriented learning, thereby reducing the cognitive dissonance that fuels impostor feelings. The current findings thus support the cognitive-behavioral perspective that flexible thinking is fundamental to psychological resilience and academic self-efficacy (Bagheri et al., 2024).

The strong association between perfectionism and impostor feelings observed in this study also echoes previous research showing that perfectionism often manifests as a precursor to impostorism. (Duncan et al., 2023) found that data science students experiencing impostor feelings frequently displayed perfectionistic cognitions, doubting their competence despite clear evidence of success. Similarly, (Fimiani et al., 2024) identified guilt over success and self-sabotaging behaviors as mechanisms through which perfectionistic individuals reinforce impostor-like feelings. Such behavioral patterns suggest that impostor experiences are not merely cognitive distortions but part of a broader self-regulatory strategy aimed at maintaining control over perceived competence. These results align with (Yaffe, 2023), who found that parental psychological control and gender expectations significantly predicted impostor feelings in adolescents, indicating that the perfectionism-impostor link may also be socially reinforced.

Interestingly, the partial mediation found in this study suggests that cognitive flexibility does not completely eliminate the effects of perfectionism on impostor feelings. This implies that other psychological and contextual factors may also contribute to this relationship. For example, (Perkins & Durkee, 2025) emphasized that social belonging and experiences of microaggressions influence impostor feelings among minority undergraduates, while (Guedes, 2023) demonstrated that impostor experiences among top managers were associated with self-efficacy deficits and fear of failure. In light of these findings, the persistence of impostor feelings even in the presence of cognitive flexibility may reflect deeper cultural, gendered, or contextual dimensions that warrant further exploration. In collectivist societies such as Canada, where humility and social harmony are valued, the internalization of modesty norms may reinforce impostor-like self-perceptions despite adaptive cognitive strategies (Yosopov et al., 2024).

Another interpretation of the results concerns the potential bidirectional relationship between perfectionism and cognitive flexibility. While this study conceptualized cognitive flexibility as a mediator, it is also plausible that high levels of perfectionism may diminish cognitive flexibility over time by promoting rigid standards and dichotomous thinking. (Jannesari, 2025) observed a similar dynamic in mothers of children with behavioral problems, where perfectionism reduced psychological flexibility, thereby increasing stress. This cyclical interaction may explain why interventions targeting flexibility often yield improvements in perfectionistic individuals. By breaking the feedback loop of rigidity and self-criticism, such interventions could indirectly alleviate impostor feelings and promote adaptive functioning. The cognitive-behavioral emphasis on metacognitive awareness and reframing, as supported by (Yang et al., 2024), provides a useful theoretical framework for understanding this interplay.

Furthermore, the results have implications for gender-specific manifestations of impostor feelings. The focus on female undergraduate students in this study is supported by extensive evidence suggesting that women are disproportionately affected by impostor experiences. (Tasya et al., 2024) argued that educational institutions often foster environments that reward perfectionism and external validation, conditions that particularly intensify impostor tendencies in female students. Similarly, (Shayesteh et al., 2024) found that impostor feelings were common among individuals with physiological anxiety symptoms, reinforcing the mind–body link in perfectionism-related distress. Cultural gender norms that associate competence with perfection may further exacerbate this dynamic, leading female students to attribute success to external factors and failure to internal flaws. The current findings thus extend previous research by demonstrating that cognitive flexibility serves as a critical moderating factor in mitigating gendered patterns of self-evaluation and impostorism (Yang et al., 2024).

Overall, this study contributes to the broader literature by confirming that perfectionism exerts a direct and indirect effect on impostor feelings through the mediating role of cognitive flexibility. The results are consistent with a

JPPR
E-ISSN: 3041-8542

cognitive-emotional model in which perfectionistic individuals engage in rigid evaluative processing that increases vulnerability to impostor experiences, while cognitive flexibility offers a pathway toward adaptive reinterpretation of self and performance. This theoretical integration not only advances empirical understanding but also underscores the importance of cognitive training interventions in educational psychology. As (Yang et al., 2025) and (Fahroedin & Morris, 2024) suggested, cognitive-emotional adaptability is fundamental for maintaining psychological well-being under performance pressures, making flexibility a key target for preventative and remedial strategies among students prone to impostorism.

Despite its contributions, this study is not without limitations. First, the use of a cross-sectional design limits causal inference regarding the directionality of relationships among perfectionism, cognitive flexibility, and impostor feelings. Longitudinal or experimental designs would be needed to establish temporal causality and potential reciprocal effects. Second, the study relied on self-report instruments, which may be subject to social desirability bias and response distortion, particularly given the self-evaluative nature of the variables. Third, the sample was limited to female undergraduate students in Canada, restricting generalizability to other populations or cultural contexts. Fourth, although the model explained a significant proportion of variance in impostor feelings, unmeasured variables such as self-compassion, resilience, or social support may further elucidate the underlying mechanisms. Finally, the reliance on quantitative methods limits insight into the lived experiences and contextual nuances of impostor feelings, which qualitative approaches could complement.

Future studies should employ longitudinal and experimental methodologies to explore the causal pathways linking perfectionism, cognitive flexibility, and impostor experiences. Cross-cultural comparisons could also clarify the influence of cultural norms, academic structures, and gender expectations on these relationships. Including male and nonbinary participants would provide a more comprehensive understanding of gender differences in impostor dynamics. Moreover, integrating neurocognitive assessments could reveal the executive functioning correlates of cognitive flexibility in perfectionism-impostor relationships. Future research may also benefit from mixed-method approaches that combine statistical modeling with qualitative interviews to capture the complexity of impostor experiences in academic contexts.

From a practical perspective, the findings underscore the need for interventions that foster cognitive flexibility and self-acceptance among perfectionistic students. Universities can incorporate psychoeducational workshops, mindfulness-based cognitive training, and resilience programs to help students reframe perfectionistic thoughts and reduce impostor cognitions. Academic advisors and counselors should be trained to identify signs of impostorism and provide supportive feedback that emphasizes effort and growth rather than flawlessness. Furthermore, promoting a campus culture that values authenticity, collaboration, and self-compassion can mitigate perfectionistic pressure and foster psychological well-being among female undergraduates.

Authors' Contributions

Authors contributed equally to this article.

Declaration

In order to correct and improve the academic writing of our paper, we have used the language model ChatGPT.

Transparency Statement

Data are available for research purposes upon reasonable request to the corresponding author.

Acknowledgments

We would like to express our gratitude to all individuals helped us to do the project.

Declaration of Interest

The authors report no conflict of interest.

Funding

According to the authors, this article has no financial support.

Ethics Considerations

The study protocol adhered to the principles outlined in the Helsinki Declaration, which provides guidelines for ethical research involving human participants.

References

JPPR
E-ISSN: 3041-8542

An, D., Wang, J., Xia, Y.-l., & Xing, W. (2025). The Effect of Cognitive Avoidance on Rumination in College Students: The Chain Mediating Role of Perfectionism and Stress. *Frontiers in psychology*, *16*. https://doi.org/10.3389/fpsyg.2025.1562927

Andira, D. P., & Daulay, A. A. (2025). Understanding the Impostor Phenomenon Among Active Student Organization Members in Indonesian Universities. *Journal of Mathematics Instruction Social Research and Opinion*, *4*(3), 739-750. https://doi.org/10.58421/misro.v4i3.668

Bagheri, S., Farahani, H., Watson, P., Bezdan, T., & Rezaiean, K. (2024). Unraveling Symptom Interplay: A Network Analysis of Procrastination in Gifted Students. *BMC psychology*, *12*(1). https://doi.org/10.1186/s40359-024-01868-6

Choi, J., & Lee, Y. E. (2025). Exploring the Impostor Phenomenon Among Korean Daycare Directors: A Grounded Theory Approach. *Behavioral Sciences*, *15*(5), 565. https://doi.org/10.3390/bs15050565

Duncan, L. R., Taasoobshirazi, G., Vaudreuil, A., Kota, J. S., & Sneha, S. (2023). An Evaluation of Impostor Phenomenon in Data Science Students. *International journal of environmental research and public health*, *20*(5), 4115. https://doi.org/10.3390/ijerph20054115

Fahroedin, D. K., & Morris, E. (2024). Perfectionism and Allied Health Professional Training: The Role Psychological Flexibility in Burnout and Depression. https://doi.org/10.31219/osf.io/cq6kr

Fimiani, R., Mannocchi, C., Gorman, B. S., & Gazzillo, F. (2024). Guilt Over Success, Impostor Phenomenon, and Self-Sabotaging Behaviors. *Current Psychology*, *43*(21), 19081-19090. https://doi.org/10.1007/s12144-024-05697-z

Guedes, M. J. (2023). Can Top Managers' Impostor Feelings Affect Performance? *Journal of Strategy and Management*, *17*(1), 188-204. https://doi.org/10.1108/jsma-01-2023-0008

Hasheminejad, F. H., Salehi, M., & Sharifi, N. (2024). Modeling the General Health of Iranian Immigrants Based on Cognitive Flexibility and Perfectionism With the Mediation of Acculturation Stress. *Jayps*, *5*(1), 78-86. https://doi.org/10.61838/kman.jayps.5.1.10

Jannesari, Z. (2025). Predicting Parental Stress in Mothers of Children With Behavioral Problems Based on Perfectionism Mediated by Psychological Flexibility. *Ijhespub*, *3*(1), 11-18. https://doi.org/10.63053/ijhes.108

Lee, J. Y., & Choi, H. (2025). Mediating Effects of Cognitive Flexibility and Self-Compassion in the Relationship Between Evaluative Concerns Perfectionism and Social Anxiety: A Meta-Analytic Path Analysis. *Korean Association for Learner-Centered Curriculum and Instruction*, *25*(8), 209-225. https://doi.org/10.22251/jlcci.2025.25.8.209

Miles, S., Nedeljkovic, M., & Phillipou, A. (2022). Can Cognitive Flexibility and Clinical Perfectionism Be Used to Identify People With Anorexia Nervosa? *Journal of clinical medicine*, *11*(7), 1954. https://doi.org/10.3390/jcm11071954

Nurfadhilah, A., & Archianti, P. (2024). Dinamika Kecemasan Akademik Pada Mahasiswa Berprestasi Yang Mengalami Impostor Syndrome. *Jurnal Psikologi*, *17*(1), 43-55. https://doi.org/10.35760/psi.2024.v17i1.8769

Park, S., & Shin, Y. (2022). Is Perfectionism Beneficial or Detrimental to Creativity? Relationships Between Creativity, Regulatory Focus, Cognitive Flexibility, and Creative Performance. *Korean Academy of Management*, *30*(3), 237-263. https://doi.org/10.26856/kjom.2022.30.3.237

Pereira, J., & Deemer, E. D. (2023). A Test of a Cognitive Appraisal Model of the Influence of Perceptions of Seriousness and Self-Compassion as Influencing Impostor Experiences. *Psi Chi Journal of Psychological Research*, *28*(3), 191-200. https://doi.org/10.24839/2325-7342.jn28.3.191

Perkins, T. R., & Durkee, M. I. (2025). Impostor Phenomenon Among Black Undergraduates: Contributions of Microaggressions, Gender, and School Belonging. *Cultural Diversity and Ethnic Minority Psychology*, *31*(4), 637-648. https://doi.org/10.1037/cdp0000694

Shayesteh, A., Boman, J., & Nylander, E. (2024). Impostor Phenomenon Is a Common Feature Among Individuals With Primary Hyperhidrosis. *Sage Open Medicine*, *12*. https://doi.org/10.1177/20503121231220828

Tasya, M. A., Nurihsan, J., Yudha, E. S., Dakes, P. S. P., & Farmadi, R. F. (2024). The Urgency of Impostor Phenomenon in Educational Institutions. *G-Couns Jurnal Bimbingan Dan Konseling*, *9*(1), 552-560. https://doi.org/10.31316/gcouns.v9i1.4902

Westover, J. (2025). Overcoming Impostor Phenomenon: My Journey to Confront Self-Doubt in the Workplace. *HCLReview*, *18*(1). https://doi.org/10.70175/hclreview.2020.18.1.3

Yaffe, Y. (2023). Maternal and Paternal Authoritarian Parenting and Adolescents' Impostor Feelings: The Mediating Role of Parental Psychological Control and the Moderating Role of Child's Gender. *Children*, *10*(2), 308. https://doi.org/10.3390/children10020308

Yang, W., Xu, S., & Yoon, S. (2025). Beneficial Banter: How Chit-Chat and Self-Oriented Perfectionism Influence Feelings of Energy and Burnout. *Journal of Hospitality & Tourism Research*. https://doi.org/10.1177/10963480251346210

Yang, X., Yeo, K. J., Lee, S.-H., & Handayani, L. (2024). A Systematic Review of Impostor Syndrome in Higher Education. *International Journal of Evaluation and Research in Education (Ijere)*, *13*(6), 3884. https://doi.org/10.11591/ijere.v13i6.30726

Yosopov, L., Saklofske, D. H., Smith, M. M., Flett, G. L., & Hewitt, P. L. (2024). Failure Sensitivity in Perfectionism and Procrastination: Fear of Failure and Overgeneralization of Failure as Mediators of Traits and Cognitions. *Journal of Psychoeducational Assessment*, *42*(6), 705-724. https://doi.org/10.1177/07342829241249784

Zhang, Y., Bai, X., & Yang, W. (2022). The Chain Mediating Effect of Negative Perfectionism on Procrastination: An Ego Depletion Perspective. *International journal of environmental research and public health*, *19*(15), 9355. https://doi.org/10.3390/ijerph19159355