Original Article

Supervisor Perfectionism and Student Performance, Creativity and Academic Procrastination.

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ABSTRACT

Background: The increasing involvement of the young generation in higher education necessitates an understanding of the effects of supervisor perfectionism on students' academic performance, creativity, and procrastination. Previous research has indicated a complex relationship between these variables, with potential influences based on gender and education level.

Objective: This study aimed to investigate the associations between supervisor perfectionism and student outcomes, including academic performance, creativity, and academic procrastination, with a focus on the role of gender and educational levels (BS and MS students).

Methods: The study employed a survey research design, with a sample size of 299 participants (200 students and 99 supervisors) from five universities in Lahore. Standardized scales such as The Big Three Perfectionism Scale, Academic Success Inventory for College Students, Creativity Scale, and Active Procrastination Scale were used. Data was collected through a combination of online (Google document form) and physical methods. Bivariate correlations and regression analyses were conducted using SPSS version 25.

Results: Supervisor Perfectionism showed significant positive correlations with both students' academic performance (r = .65) and procrastination (r = .39), but not with creativity. Self-Oriented Perfectionism was highly correlated with various performance subscales like efficacy of the instructor (r = .57) and personal adjustment (r = .47). Gender differences were evident, with male students showing better performance and higher procrastination levels. MS students demonstrated better academic performance and more procrastinating behaviors compared to BS students. Regression analysis indicated that Supervisor Perfectionism positively predicted students' academic performance and procrastination.

Conclusion: The study underscores the significant impact of supervisor perfectionism on student academic outcomes, highlighting its positive correlation with academic performance and procrastination. The findings emphasize the need for awareness of these dynamics in educational settings, considering individual differences such as gender and education level.

Keywords: Supervisor Perfectionism, Academic Performance, Creativity, Academic Procrastination, Gender Differences, Educational Levels.

INTRODUCTION

In the contemporary educational landscape, there is an increasing participation of the youth in higher education, necessitating research studies and projects that often require guidance from expert supervisors. This study delves into the ramifications of supervisor perfectionism on student outcomes, specifically academic performance, creativity, and academic procrastination. The tragic case of Nadia Ashraf at Karachi University, who succumbed to suicide likely after a prolonged struggle with her thesis under a perfectionist supervisor, underscores the urgency of this inquiry (1, 2).

Perfectionism, a multidimensional personality trait characterized by a relentless striving for flawlessness and excessively critical self-evaluations, has been intricately linked with various mental health conditions, particularly clinical anxiety (3, 4). Brown (2019)

differentiates perfectionism from healthy striving, noting that it often emerges as a defense mechanism against feelings of shame and failure (5). This distinction is crucial in understanding its impact on academic settings (2, 6).

The relationship between perfectionism and creativity has been a subject of considerable interest. It found a significant correlation between constructive perfectionism and creativity, suggesting that not all aspects of perfectionism are detrimental. This positive aspect of perfectionism, however, contrasts with its link to academic procrastination. It has been observed a strong positive association between perfectionism, especially its socially prescribed dimension, and academic procrastination (4, 5, 7).

Academic performance, a key concern in educational research, is influenced by a multitude of factors ranging from student efforts, family background, socio-economic status, to intrinsic motivation. In this context, the role of supervisor perfectionism becomes particularly salient. It was highlighted the interpersonal dynamics of supervisory perfectionism, noting its potential to stifle creativity and burden students, thereby impacting their academic performance negatively (8, 9).

The literature also points to the link between perfectionism and procrastination. It is emphasized the need to understand why perfectionists, driven by the fear of failure, often resort to procrastination. It can be further explored this connection, indicating that perfectionism-related problems could manifest as learned helplessness, impacting academic achievement adversely (10-12).

The study aims to investigate the multifaceted associations between supervisor perfectionism and various student outcomes. This includes exploring the impact of different dimensions of perfectionism, such as self-oriented perfectionism, others-oriented perfectionism, and entitlement, on students' academic performance, which encompasses factors like efficacy of the instructor, personal adjustment, self-regulation, and lack of anxiety. Additionally, the study seeks to understand the gender differences and variations across academic levels (BS and MS) in these relationships (13, 14).

The hypotheses formulated for this study are grounded in the intricate interplay between supervisor perfectionism and student outcomes. It is hypothesized that there is a significant relationship between supervisor perfectionism, encompassing its various dimensions, and student outcomes, including academic performance, creativity, and academic procrastination. Additionally, the study posits potential gender differences and differences across academic levels in these relationships. It examines the specific impacts of different facets of perfectionism on student academic performance and procrastination (6, 10, 15).

This comprehensive exploration aims to contribute valuable insights to the field of education, particularly in understanding the nuanced impacts of supervisor perfectionism on student outcomes. By shedding light on these dynamics, the study seeks to inform future educational practices and interventions aimed at enhancing student well-being and academic success (16-18).
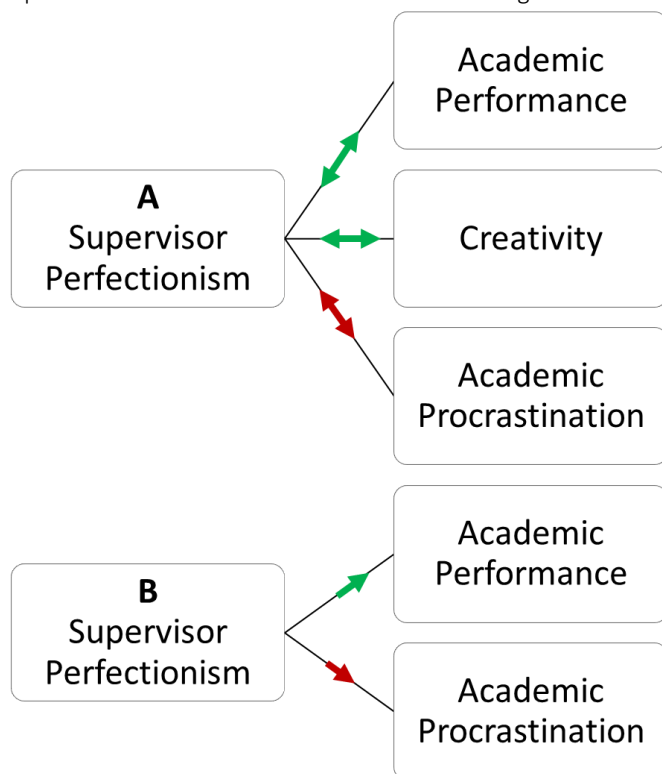

Figure 1 (A) Proposed Model of Relationship and (B) Model of Prediction

MATERIAL AND METHODS

In this study, a survey research design was employed to investigate the associations between supervisor perfectionism, student procrastination, creativity, and academic performance. The participants comprised 400 individuals, including thesis students and their supervisors, from Lahore city. They were approached at five universities: Riphah International University Lahore, University of Punjab, University of Management and Technology Lahore, University of Lahore, and University of Central Punjab. The final sample consisted of 299 participants (200 students and 99 supervisors) with the student age range between 18 to 36 years and supervisors aged 30 to 60 years.

For demographic representation, the sample included 82 male and 118 female students, while supervisor gender distribution was 55 males and 145 females. The educational level of the students was nearly evenly split between bachelor's and master's degrees, with 101 students in their BS year and 99 in their MS year (10, 13, 16, 19).

The Big Three Perfectionism Scale, developed by Smith (2016), was utilized to measure perfectionism. This 45-item scale, with a 5-point Likert response format ranging from 'strongly disagree' to 'strongly agree', demonstrated a Cronbach's Alpha of .87, indicating high reliability. For this study, the sub-scales focusing on Self-Oriented Perfectionism, Entitlement, and Other-Oriented Perfectionism were employed (20-23).

To assess academic performance, the Academic Success Inventory for College Students (ASICS) by Theresa (2010) was used (19). This tool, validated for internal reliability with a Cronbach's alpha of .93, is a five-point scale. The present study utilized its subscales of the efficacy of the instructor, personal adjustment, self-regulation, and lack of anxiety, which closely aligned with the study's objectives.

Creativity was measured using the four-item Creativity Scale by Scott and Bruce (1998). This scale, designed to evaluate employee creativity in an organizational context, showed a Cronbach's alpha of 0.86 and significant correlation with objective measures of individual innovation. Its five-point rating scale ranged from 'strongly disagree' to 'strongly agree'.

The Active Procrastination Scale (APS) by Choi and Moran (2009), comprising 16 items and covering four factors (outcome satisfaction, preference for pressure, intentional decision, and ability to meet deadlines), was used to measure procrastination (24). The APS's 7-point Likert-type scale ranged from 'not at all true' to 'very true', with Cronbach's alpha values for the four dimensions ranging between .70 and .83, suggesting satisfactory reliability (25).

Data collection involved administering these scales to the selected participants. Ethical considerations were meticulously adhered to, including obtaining informed consent from all participants and ensuring confidentiality and anonymity in the handling of data. The study's procedures were reviewed and approved by an institutional review board, in line with ethical standards for research involving human subjects (26-28).

Data analysis was conducted using SPSS version 25. The statistical methods applied included descriptive statistics for demographic data, and inferential statistics, such as correlation and regression analyses, to explore the relationships between the variables of interest. This comprehensive methodological approach aimed to ensure robust and reliable findings, contributing significantly to the existing body of knowledge on the impact of supervisor perfectionism on student outcomes (26).

RESULTS

Table 4.1 Psychometric Properties of the Present Study Measures and Subscales and subscales (N=299

Scales	N	M	SD	Range	Cronbach's α
The Big Three Perfectionism	14	55.54	8.33	26-68	.87
Self-oriented Perfectionism	5	20.1	2.9	9-25	.60
Others-oriented Perfectionism	5	19.83	3.6	8-25	.75
Entitlement	4	15.63	3.1	4-20	.78
Academic Success Inventory	15	53.31	11.2	31-72	.89
Efficacy of the Instructor	5	18.63	4.12	8-25	.72
Personal Adjustment	3	9.8	3.3	3-15	.79
Self-Regulation	5	14.73	3.10	5-20	.57
Lack of Anxiety	3	10.20	2.87	3-15	.76
Creativity Scale	3	12.55	1.46	9-15	.59
Active Procrastination Scale	16	80.5	16.7	40-107	.89

Note: N= Number of Items, M = Mean, SD = Standard Deviation, α = alpha reliability

Table 4.1 indicates psychometric properties of Questionnaires used in the present study. Cronbach's Alpha reliability The Big Three Perfectionism is α = .87, which is considered to be highly reliable. Sub-scales that were used in the study were also highly reliable as self-oriented perfectionism α = .60 is moderately reliable. The subscale of others-oriented perfectionism α = .75 and subscale of entitlement α = .78.

Academic Success Inventory is to measure academic performance of students has α = .89 which indicates satisfactory level of reliability. The subscales of inventory used in the study also has independent high reliability as subscale of efficacy of the instructor α = .72, subscale of personal adjustment α = .79, subscale of self-regulation α = .57 and subscale of lack of anxiety α = .76.

Creativity Scale has α = .59 which is considered as satisfactory level of reliability. Lastly, Active Procrastination Scale has Cronbach's alpha α = .89, which presents high reliability. Overall, results revealed all scales have authentic and satisfactory reliability.

Table 4.2 Independent t-test for Participants (BS and MS Students) of Study on Scales of Academic Performance, Creativity and Academic Procrastination (N=299)

	BS (n=101)		MS(99)				
Variables	M	SD	M	SD	t(df)	p	Chohen's d
Academic Success Inventory	48.5	11.9	58.3	7.6	-6.9(198)	.000	0.98
Creativity Scale	12.4	1.45	12.7	1.5	-1.2(197)	.225	0.20
Active Procrastination Scale	76.03	15.8	85.1	16.3	-3.97(198)	.000	0.56

Note: n=number of participants), M = Mean, SD = Standard Deviation, t = Magnitude of difference, df = Degree of freedom, Chohen's d = Effect Size, ***p<0.000

Table 4.2 shows mean difference of both groups of students (BS and MS) on Academic Success Inventory. It showed that MS Students perform better (mean = 58.3) as compared to BS Students (mean = 48.5). Independent sample t-test showed that the difference between academic performance of BS and MS students was statistically significant (t =-6.9, df = 198, p = .000 one-tailed). The magnitude of the differences in the means (mean difference = 9.8) was large and effect size was (d = 0.98).

The table 4.2 also shows mean difference of both groups of students (BS and MS) on Creativity Scale. The results indicate that BS Students are more creative (mean = 12.4) than MS Students (mean = 12.7). Independent sample t-test showed that the difference between creativity of BS and MS students was statistically significant (t =-1.2, df = 197, p = .112 one-tailed). The proportion of the differences is 0.3, was small and effect size was (d = 0.20).

The results in table 4.2 on scale of procrastination indicate that MS Students procrastinate on tasks (mean = 85.1) as compare to BS Students (mean = 76.03). Independent sample t-test showed that the difference between academic procrastination of BS and MS students was statistically significant (t =-3.97, df = 198, p = .000 one-tailed). The magnitude of the differences in the means (mean difference = 9.07) was average and effect size was (d = 0.56).

Table 4.3 Independent t-test for Men and Women of Study on Scales of Academic Performance, Creativity and Academic Procrastination (N=299)

	Men (n=82)		Women (n=118)				
Variables	M	SD	M	SD	t(df)	P	Chohen's d
Academic Success Inventory	58.4	9.42	49.8	10.9	5.8(198)	.000	0.84
Creativity Scale	12.7	1.41	12.5	1.5	.79(180)	.433	0.14
Active Procrastination Scale	83.3	15.7	78.6	16.4	1.97(198)	.05	0.29

Note: M = Mean, SD = Standard Deviation, t = Magnitude of difference, df = Degree of freedom, Chohen's d = Effect Size, ***p<0.000

Table 4.3 shows mean difference of both groups of students regarding gender (Men and Women) on Academic Success Inventory. It showed that Men perform better (mean = 58.4) as compared to women (mean = 49.8). Independent sample t-test showed that the difference between academic performance of men and women students was statistically significant (t = 5.8, df = 198, p = .000 one-tailed). The proportion of the differences in the means (mean difference = 8.6) was large and effect size was (d = 0.84).

The table 4.3 also shows mean difference of both groups of students on basis of gender (men and women) on Creativity Scale. The results indicate that there is no change between creativity of different genders regarding creativity as means of both genders are as, 12.7 and 12.5 respectively. Independent sample t-test showed that the difference between creativity of men and women was statistically non-significant (t = .79, df = 180, p = .22 one-tailed). The magnitude of the differences in the means (mean difference = 0.2) was small and effect size was (d = 0.14).

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Table 4.3 shows mean difference of both groups of students regarding gender (Men and Women) on Active Procrastination Scale. It showed that Men procrastinate more (mean = 83.3) as compared to women (mean = 78.6). Independent sample t-test showed that the change among academic procrastination of genders students was statistically significant (t = 1.97, df = 198, p = .025 one-tailed). The magnitude of the differences in the means (mean difference = 4.7) was medium and effect size was (d = 0.29).

Table 4.4 Bivariate Correlation of Study Variables (N=200)

Variables	N	1	2	3	4	5	6	7	8	9	10	11
Supervisor Perfectionism	200	-										
Self-Oriented Perfectionism	200	.86**	-									
Others-oriented Perfectionism	200	.90**	.64**	-								
Entitlement	200	.89**	.67**	.70**	-							
Academic Performance	200	.65**	.56**	.59**	.56**	-						
Efficacy of the Instructor	200	.67**	.57**	.60**	.58**	.85**	-					
Personal Adjustment	200	.59**	.47**	.55*	.52**	.89**	.67**	-				
Self-Regulation	200	.45**	.41**	.38**	.42**	.79**	.49**	.69**	-			
Lack of Anxiety	200	.39**	.38**	37**	.29**	.80**	.60**	.60**	.52**	-		
Creativity	200	.11	.12	.05**	.14**	.12	.13**	.04	.18*	.07	-	
Academic Procrastination	200	.39**	.36**	.32**	.36**	.33**	39**	.24**	.18**	.23**	-.02	-

N = Number of Participants, **p<0.01, *p<0.05

Table 4.4 displays the analysis output of bivariate correlation of which identifies the relationship between study variables. The results shows supervisor perfectionism has significant positive relationship (r = .65) with student's academic performance the results indicates that when supervisor's perfectionism increases then students' academic performance also increases. The students of highly perfectionist supervisors perform better than the others. The results of correlation between perfectionism subscale of Self-oriented perfectionism has highly significant positive correlation with performance subscale efficacy of the instructor, personal adjustment, self-regulation and lack of anxiety (r = .57, r = .47, r = .41 and r = .38) respectively.

The output of correlation between perfectionism subscale of others-oriented perfectionism has highly significant positive correlation with performance subscale efficacy of the instructor, personal adjustment, self-regulation and lack of anxiety (r = .60, r = .55, r = .38 and r = .37) respectively. In the same time the outputs of correlation between perfectionism subscale of entitlement has highly significant positive correlation with performance subscale efficacy of the instructor, personal adjustment, self-regulation and lack of anxiety (r = .58, r = .52, r = .42, and r = .29) respectively.

The table 4.4 also displays the bivariate correlation between supervisor perfectionism student's creativity. The variables are not significantly correlate as (r = .11) shows that there is no relationship between supervisor's perfectionism on student's academic creativity.

The results in table 4.4 also reveal that supervisor perfectionism is positively correlated with academic procrastinating behavior in students. The correlation value (r = .39) explains the increase in perfectionism cause increase in procrastination. It suggests that the supervisor's perfectionism makes the students to delay the academic tasks with thought that they are not mentally prepared to complete tasks on time.

Table 4.5 Regression coefficient of Supervisor Perfectionism (self-oriented perfectionism, others-oriented perfectionism and entitlement) on Student's Academic Performance (efficacy of the instructor, personal adjustment, self-regulation and lack of anxiety)

Variables	B	B	SE
Constant	5.32***		4.10
Perfectionism	.86***	.65	.07
R2	.42		

Note: N=200. ***P<.001

Table 4.5 shows the impact of supervisor perfectionism on students' academic performance. The R2 value of .42 revealed that the predictor variables explained .42% variance in the outcome variables with F(1,198) = 140.7, p <.001. The finding revealed that supervisor perfectionism positively predicted students' academic performance. (β = .65, p < .001).

Table 4.6 Regression coefficient of Supervisor Perfectionism (self-oriented perfectionism) on Student's Academic Performance (efficacy of the instructor, personal adjustment, self-regulation and lack of anxiety)

Variables	B	B	SE	B	β	SE	B	B	SE	B	β	SE
	EoI			PA			SR			LoA		
Constant	1.83***		1.76	-1.41		1.49	5.67***		1.45	2.30***		1.37
SOP	.83***	.57	.09	.56***	.47	.07	.45***	.41	.07	.39***	.38	.07
R2	.32			.23			.16			.15		

Note: N=200. ***P<.001, SOP = self-oriented perfectionism, EoI = efficacy of the instructor,

PA = personal adjustment, SR = self-regulation, LoA = lack of anxiety

Table 4.6 also shows the impact of perfectionism subscale of self-oriented perfectionism on performance subscales efficacy of the instructor, personal adjustment, self-regulation and lack of anxiety. The R2 value of .32, .23, .16 and .15 revealed that the predictor variables explained .32%, .23%, .16% and .15% respectively, variance in the outcome variables with $F_{(1,198)} = 92.98$, p <.001, $F_{(1,198)} = 57.33$, p <.001, $F_{(1,198)} = 38.83$, p <.001, and $F_{(1,198)} = 33.80$, p <.001, . The finding revealed that supervisor perfectionism positively predicted students' academic performance. (β = .57, .47, .41, .38, p < .001).

Table 4.7 Regression coefficient of Supervisor Perfectionism (others-oriented perfectionism) on Student's Academic Performance (efficacy of the instructor, personal adjustment, self-regulation and lack of anxiety)

Variables	B	B	SE	B	β	SE	B	β	SE	B	β	SE
	EoI			PA			SR			LoA		
Constant	4.40***		1.30	-.30		1.10	8.1***		1.15	4.29***		1.07
OOP	.72***	.62	.07	.51***	.55	.05	.33***	.38	.06	.30***	.37	.05
R2	.38			.31			.15			.14		

Note: N=200. ***P<.001, OOP = others-oriented perfectionism, EoI = efficacy of the instructor,

PA = personal adjustment, SR = self-regulation, LoA = lack of anxiety

The Table 4.7 displayed the impact of perfectionism subscale of others-oriented perfectionism on performance subscales efficacy of the instructor, personal adjustment, self-regulation and lack of anxiety was analyzed. The R2 value of .38, .31, .15 and .14 revealed that the predictor variables explained .38%, .31%, .14% and .14% respectively, variance in the outcome variables with $F_{(1,198)} = 123.63$, p <.001, $F_{(1,198)} = 86.91$, p <.001, $F_{(1,198)} = 34.10$, p <.001, and $F_{(1,198)} = 31.38$, p <.001, . The finding revealed that supervisor perfectionism positively predicted students' academic performance. (β = .62, .55, .38, .37, p < .001).

Table 4.8 Regression coefficient of Supervisor Perfectionism (entitlement) on Student's Academic Performance (efficacy of the instructor, personal adjustment, self-regulation and lack of anxiety)

Variables	B	B	SE	B	β	SE	B	β	SE	B	β	SE
	EoI			PA			SR			LoA		
Constant	6.40***		1.24	1.06***		1.03	8.14***		1.04	6.01***		1.02
Entitlement	.79***	.58	.08	.56***	.52	.07	.42***	.45	.07	.27***	.29	.06
R2	.34			.27			.17			.08		

Note: N=200. ***P<.001, EoI = efficacy of the instructor, PA = personal adjustment, SR = self-regulation, LoA = lack of anxiety

The table 4.8 shows impact of perfectionism subscale of entitlement on performance subscales efficacy of the instructor, personal adjustment, self-regulation and lack of anxiety was analyzed. The R2 value of .34, .27, .17 and .08 revealed that the predictor variables explained .34%, .27%, .17% and .08% respectively, variance in the outcome variables with $F_{(1,198)} = 101.13$, p <.001, $F_{(1,198)} = 73.82$, p <.001, $F_{(1,198)} = 41.54$, p <.001, and $F_{(1,198)} = 17.60$, p <.001, . The finding revealed that supervisor perfectionism positively predicted students' academic performance. (β = .58, .52, .45, .29, p < .001)

Table 4.9 Regression coefficient of Supervisor Perfectionism on Student's Academic Procrastination

Variables	B	β	SE
Constant	7.36***		7.36
Perfectionism	.78***	.39	.13
R2	.15		

Note: N=200. ***P<.00

Table 4.9 shows the impact of supervisor perfectionism on students' academic procrastination. The R^2 value of .15 revealed that the predictor variables explained .15% variance in the outcome variables with $F_{(1,198)} = 35$, $p <.001$. The finding revealed that supervisor perfectionism positively predicted students' academic performance. ($\beta = .39$, $p < .001$).

DISCUSSION

In this study, the intricate relationship between supervisor perfectionism and its impact on students' academic performance, creativity, and academic procrastination was explored, emphasizing the role of gender and educational level. The data was garnered from various universities in Lahore, with a notable proportion of female students (59%) and supervisors (72.5%). The utilization of both online and physical data collection methods, as advocated by Melo (2023), allowed for a wider and more diverse participant range (29).

The research employed reliable and standardized scales such as The Big Three Perfectionism Scale ($\alpha = .87$), Academic Success Inventory for College Students ($\alpha = .89$), Creativity Scale ($\alpha = .59$), and Active Procrastination Scale ($\alpha = .89$) (30). The findings revealed a significant positive correlation between supervisor perfectionism and both students' academic performance and procrastination, but not creativity, echoing Çapan (2010)'s findings on the positive relationship between perfectionism and academic procrastination (31). The detailed analysis of the subscales of The Big Three Perfectionism Scale (Self-oriented perfectionism, others-oriented perfectionism, and entitlement) demonstrated significant correlations with performance subscales (efficacy of the instructor, personal adjustment, self-regulation, and lack of anxiety) (22, 23, 32).

Gender-based differences were noted, with male students exhibiting better academic performance and higher procrastination levels, similar gender-related trends in academic performance and procrastination behaviors. The comparison between BS and MS students revealed that MS students displayed superior academic performance and a greater tendency to procrastinate.

The study's primary strength lies in its comprehensive approach, combining different scales to assess the multifaceted nature of supervisor perfectionism and its varied impacts. However, the limitations are notable (20, 21, 33). The time constraints and geographical limitations to Lahore city restrict the generalizability of the findings. The use of Google document forms for data collection, necessitated by the COVID-19 pandemic, might have influenced the participants' responses. Furthermore, the scales, while comprehensive, did not exploit their potential to examine detailed causal relationships between different domains.

The study's quantitative nature limits the depth of understanding that could be achieved with qualitative methods. The reluctance of many individuals to participate, viewing it as a waste of time, also constrained the data breadth. Future research could benefit from a qualitative approach to gain deeper insights into the phenomena. Larger sample sizes and data collection from diverse geographical locations would enhance the generalizability of findings. There is a need for a more nuanced understanding of the effects of different types of supervisor perfectionism (young vs. older supervisors) on various student outcomes.

The implications of this research are significant for psychologists and educators, providing a better understanding of the effects of perfectionism in academic settings. It contributes to the literature on educational psychology and can inform practices in the education sector. The increasing prevalence of perfectionism underscores the need for greater awareness and intervention strategies in both educational and clinical settings (14, 15, 34).

CONCLUSION

In conclusion, the research provides valuable insights into the complex dynamics of supervisor perfectionism and its multifaceted impacts on students. The findings underscore the importance of considering individual differences, such as gender and educational level, in understanding these relationships. The study paves the way for future research to further dissect these relationships, employing more diverse methodologies and broader participant bases for a more comprehensive understanding of the role of perfectionism in academic contexts.

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